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RESULTS OF TESTS IN THE NASA/LaRC 31-INCH CFHT ON AN 0.010-SCALE MODEL (32-OT) OF THE SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE THE RCS JET FLOWFIELD INTERACTION EFFECTS ON AERODYNAMIC CHARACTERISTICS (IA60/OA105)

VOLUME 2 OF 2

By

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Prepared under NASA Contract Number NAS9-13247

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WIND TUNNEL TEST SPECIFICS:

Test Number:	LaRC 31-inch CFHT-108 and 109
NASA Series Number:	IA60/0A105
Model Number:	32-0T
Test Dates:	IA60: 14 through 20 Feb. 1974
	0A105: 20 through 22 February 1974

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RESULTS OF TESTS IN THE NASA/LaRC 31-INCH CFHT ON AN 0.010-SCALE MODEL (32-OT) OF THE SPACE SHUTTLE CONFIGURATION 3 TO DETERMINE THE RCS JET FLOWFIELD INTERACTION EFFECTS ON AERODYNAMIC CHARACTERISTICS (IA60/OA105)

By D. E. Thornton, Rockwell International Space Division

ABSTRACT

Tests were conducted in the NASA Langley Research Center 31-inch continuous Flow Hypersonic Wind Tunnel from 14 February to 22 February 1974, to determine RCS jet interaction effect on the hypersonic aerodynamic and stability and control characteristics prior to RTLS abort separation. The model used was an 0.010-scale replica of the Space Shuttle Vehicle Configuration 3. Hypersonic stability data were obtained from tests at Mach 10.3 and dynamic pressure of 150 psf for the integrated Orbiter and external tank and the Orbiter alone. RCS modes of pitch, yaw, and roll at free flight dynamic pressure simulation of 7, 20, and 50 psf were investigated. The effects of speedbrake, bodyflap, elevon, and aileron deflections were also investigated.

This report is published in two volumes. Volume 1 contains data from test IA60 and Volume 2 contains OA105 data.

Volume 2 utilizes selected data from test OA85 (LaRC CHFT 101) in both plotted and tabulated form. Test OA85 is completely documented in DMS-DR-2113.

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TABLE OF CONTENTS

	Page
ABSTRACT	iii
INDEX OF MODEL FIGURES	2
INDEX OF DATA FIGURES	3
NOMENCLATURE	6
CONFIGURATIONS INVESTIGATED	10
INSTRUMENTATION	11
TEST FACILITY DESCRIPTION	12
DATA REDUCTION	13
TABLES	
I. TEST CONDITIONS	14
II. DATA SET/RUN NUMBER COLLATION SUMMARY	15
III. MODEL DIMENSIONAL DATA	22
IV. JET COEFFICIENTS	44
FIGURES	
MODEL	45
DATA	51
APPENDIX	
TABULATED SOURCE DATA	

INDEX OF MODEL FIGURES

Figure	Title	Page
1.	Axis systems.	45
2.	Model sketches.	
a.	Orbiter Umbilical Door Fairing Support (FR_6) and LO_2 (FL_7) and LH_2 (FL_8) Feedlines	46
b.	Forward Attachment of the External Tank to the Orbiter (AT_{21})	47
c.	Aft Attachment of External Tank to Orbiter ($AT_{22,23}$)	48
d.	External Tank Protuberance (PT_{16}, PT_{17}, PT_{18})	49
3.	Model installation photograph.	50

INDEX OF DATA FIGURES

FIGURE NUMBER	TITLE	SCHEDULE OF COEFFICIENTS PLOTTED	CONDITIONS VARYING	PAGES
Fig. 4	Effect of Elevon Deflection on N49N50 RCS Jet Interaction, Beta = 0	(A)	ELEVON	1-6
Fig. 5	Effect of Elevon Deflection on N52 RCS Jet Interaction, Beta = 0	(B)	ELEVON Q-SIM PCRCS	7-32
Fig. 6	Effect of BDFLAP Deflection on N52 RCS Jet Interaction, Beta = 0	(B)	BDFLAP Q-SIM PCRCS	33-71
Fig. 7	Effect of Elevon Deflection on N49N52 RCS Jet Interaction, Beta = 0	(C)	ELEVON Q-SIM PCRCS	72-89
Fig. 8	Effect of Aileron Deflection on N49N52 RCS Jet Interaction, Beta = 0	(C)	AILRON Q-SIM PCRCS	90-98
Fig. 9	Effect of BDFLAP Deflection N49N52 RCS Jet Interaction, Beta = 0	(C)	BDFLAP Q-SIM PCRCS	99-125
Fig. 10	Effect of Rudder Deflection on N49N52 RCS Jet Interaction, Beta = 0	(C)	RUDDER Q-SIM PCRCS	126-134
Fig. 11	Effect of Sideslip Angle on N49N52 RCS Jet Interaction, Alpha = 0	(C)	BETA Q-SIM PCRCS	135-143
Fig. 12	Effect of Elevon Deflection on N51 Jet Interaction, Beta = 0	(D)	ELEVON Q-SIM PCRCS	144-167

INDEX OF DATA FIGURES (Continued)

FIGURE NUMBER	TITLE	SCHEDULE OF COEFFICIENTS PLOTTED	CONDITIONS VARYING	PAGES
Fig. 13	Effect of BDFLAP Deflection on N51 RCS Jet Interaction, Beta = 0	(D)	BDFLAP Q-SIM PCRCS	168-203
Fig. 14	Effect of Elevon Deflection on N49 RCS Jet Interaction, Beta = 0	(E)	ELEVON Q-SIM PCRCS	204-221
Fig. 15	Effect of BDFLAP Deflection on N49 RCS Jet Interaction, Beta = 0	(E)	BDFLAP Q-SIM PCRCS	222-248

INDEX OF DATA FIGURES (CONCLUDED)

SCHEDULE OF COEFFICIENTS PLOTTED:

(A) KND, KLMD, DCN, DCLM, CN, CLM versus ALPHA

(B) KNU, KLMU, KBLU, KM,BLU, KYN,LU, DCN, DCLM, DCBL, DCYN, CN, CLM, CBL, CYN versus ALPHA

(C) KBLU/D, KM,BL2, KYN,L2, DCBL, DCLM, DCYN, CBL, CLM CYN versus ALPHA

(D) KYN, KM,YN, KBL,YN, KY, DCYN, DCLM, DCBL, DCY, CYN, CLM, CBL, CY versus ALPHA

(E) KBLD, KM,BLD, KYN,LD, DCBL, DCLM, DCYN, CBL, CLM, CYN versus ALPHA

NOMENCLATURE
General

SYMBOL	SADSAC SYMBOL	DEFINITION
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2, psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2, psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3, $slugs/ft^3$
		Reference & C.G. Definitions
A_b		base area; m^2, ft^2
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
ℓ_{REF} $\bar{c}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2, ft^2
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

Body-Axis System

SYMBOL	SADSAC SYMBOL	DEFINITION
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
		Stability-Axis System
C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS\ell_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C_ℓ	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$
L/D	L/D	lift-to-drag ratio; C_L/C_D
L/D_f	L/DF	lift to forebody drag ratio; C_L/C_{D_f}

NOMENCLATURE (Continued)

Symbol	SADSAC Symbol	Definition
ΔC_A	DCA	incremental axial-force Coefficient
ΔC_ℓ	DCBL	incremental rolling-moment coefficient
ΔC_m	DCLM	incremental pitching-moment coefficient
ΔC_N	DCN	incremental normal-force coefficient
ΔC_n	DCYN	incremental yawing-moment coefficient
ΔC_Y	DCY	incremental side-force coefficient
$K_{\ell_{u/D}}$	KBLU/D	amplification factor on rolling moment due to up and down firing coupled jets = $(\Delta C_\ell / C_{\ell_{JU/D}}) + 1$
K_{ℓ_D}	KBLD	amplification factor on rolling moment due to down firing jets $= (\Delta C_\ell / C_{\ell_{JD}}) + 1$
K_{ℓ_u}	KBLU	amplification factor on rolling moment due to up firing jets = $(\Delta C_\ell / C_{\ell_{JU}}) + 1$
$K_{\ell,n}$	KBL,YN	cross-coupling factor on rolling moment due to yaw jets = $\Delta C_\ell / \lvert C_{\ell_{JU/D}} \rvert$
K_{m_D}	KLMD	amplification factor on pitching moment due to down firing jets = $(\Delta C_m / C_{m_{JD}}) + 1$
K_{m_u}	KLMU	amplification factor on pitching moment due to up firing jets = $(\Delta C_m / C_{m_{JU}}) + 1$
$K_{m,\ell_{u/D}}$	KM,BL2	cross-coupling factor on pitching moment due to up and down firing coupled roll jets = $\Delta C_m / \lvert C_{m_{JD}} \rvert$
K_{m,ℓ_D}	KM,BLD	cross-coupling factor on pitching moment due to down firing roll jets = $\Delta C_m / \frac{1}{2} \lvert C_{m_{JD}} \rvert$
K_{m,ℓ_u}	KM,BLU	cross-coupling factor on pitching moment due to up firing roll jets = $\Delta C_m / \frac{1}{2} \lvert C_{m_{JU}} \rvert$
$K_{m,n}$	KM,YN	cross-coupling factor on pitching moment due to yaw jets = $\Delta C_m / \lvert C_{m_{JD}} \rvert$

NOMENCLATURE (Concluded)

K_{N_D}	KND	amplification factor on normal force due to down firing jet = $(\Delta C_N/C_{N_{JD}}) + 1$
K_{N_u}	KNU	amplification factor on normal force due to up firing jet = $(\Delta C_N/C_{N_{JU}}) + 1$
$K_{n,\ell_{u/D}}$	KYN,L2	cross-coupling factor on yawing moment due to up and down firing coupled roll jets = $\Delta C_n/\lvert C_{n_{JS}}\rvert$
K_{n,ℓ_D}	KYN,LD	cross-coupling factor on yawing moment due to down firing roll jets = $\Delta C_n/\frac{1}{2}\lvert C_{n_{JS}}\rvert$
K_{n,ℓ_u}	KYN,LU	cross-coupling factor on yawing moment due to up firing roll jets = $\Delta C_n/\frac{1}{2}\lvert C_{n_{JS}}\rvert$
K_n	KYN	amplification factor on yawing moment = $(\Delta C_n/C_{n_{JS}}) + 1$
K_Y	KY	amplification factor on side force = $(\Delta C_Y/C_{Y_{JS}}) + 1$
RCS		reaction control system
RTLS		return to launch site
δ_a	AILRON	aileron deflection angle, degrees
δ_e	ELEVON	elevon deflection angle, degrees
δ_f	BDFLAP	body flap deflection angle, degrees
δ_R	RUDDER	rudder deflection angle, degrees
δ_{SB}	SPDBRK	speed brake deflection angle, degrees
P_c	PCRCS	model RCS air supply system plenum chamber pressure, psi
	Q-SIM	free stream dynamic pressure for a simulated flight condition, psf

CONFIGURATIONS INVESTIGATED

Two configurations were tested. These were the second stage ascent configuration consisting of Orbiter with External Tank attached, and the RTLS configuration (Orbiter alone). The model used for this test was an 0.010-scale replica of Configuration 3 of the Space Shuttle Orbiter and External Tank.

For convenience the configuration nomenclature was abbreviated as follows: The symbols are defined in the Model Dimensional Data.

$$O = B_{19}\ C_7\ E_{23}\ F_5\ M_6\ N_{39}\ R_5\ V_7\ W_{107}$$

$$OT = B_{19}\ C_7\ E_{23}\ F_5\ M_6\ N_{39}\ R_5\ V_7\ W_{107}\ T_{10}$$

T_{10} included the attach structure and protruberances FL_7, FL_8, PT_{16}, PT_{17}, PT_{18}, AT_{21}, AT_{22}, and AT_{23}.

Control surface effectiveness was investigated with elevon deflections of +15° and -20°, aileron deflections of +5°, +10°, +15°, and -15°, rudder deflections of +20°, bodyflap deflections of +13.75° and -14.25°, and a speedbrake deflection of 55°.

INSTRUMENTATION

The LaRC 0.75-inch six-component 2019C internal balance was used for this test program.

No model base pressures or balance chamber pressures were measured during this test. The RCS supply pressure was set and monitored at the plenum chambers between the two RCS nozzle blocks.

TEST FACILITY DESCRIPTION

The Mach 10 nozzle of the Langley Continuous Flow Hypersonic Tunnel is designed to operate at stagnation pressures of 15 to 150 atmospheres at temperatures up to 1960°R. Air is preheated electrically by passing through a multi-tube heater. The nozzle has a 31-inch square test section which incorporates a moveable second minimum. Continuous operation is achieved by passing the air through a series of compressors. Additional information on this facility is given in NASA TM X-1130 entitled, "Characteristics of Major Active Wind Tunnels at the Langley Research Center", by William T. Schaefer, Jr.

DATA REDUCTION

Aerodynamic forces and moments were reduced to coefficient form using the following reference dimensions:

Reference area (S) = 0.269 ft^2 (38.736 in^2)

Reference Lengths

$\bar{c}$ = 4.748 in (C_m)

b = 9.367 in (C_m, C_ℓ)

L_{REF} = 12.90 in ($X_{c.p.}$)

The moments were reduced about a moment reference center located as follows:

Orbiter Only

Orbiter station 10.767 at Y_o = 0.00 and Z_o = 3.75

Integrated Vehicle

X_T = ET station 17.258 (7.368 inches aft of orbiter nose)

Y_T = 0.00

Z_T = 6.336 (.994 inches below orbiter FRL)

Standard LaRC data reduction techniques were used for reducing the data to coefficient form.

TABLE I.

TEST : IA60/ 0A105 DATE : 2/22/74

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
10.3	1.0×10^6	1.04	1350

BALANCE UTILIZED: LaRC 2019C

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	70 lbs	0.35 lbs	
SF	25 lbs	0.125 lbs	
AF	15 lbs	0.075 lbs	
PM	70 in-lbs	0.35 in-lbs	
RM	15 in-lbs	0.075 in-lbs	
YM	25 in-lbs	0.125 in-lbs	

COMMENTS:

TABLE II.

RCS OFF

TEST: IA60 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2-20-74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION q_∞	CONTROL DEFLECTION P_c	CONTROL DEFLECTION δ_e	CONTROL DEFLECTION δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{bs}	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{sb}	RUN NO.
RH101F	OT N51	A	0	150	OFF	15	0	1	0	0	3
02F	OT N52	~	~	~	~	0	0	1	0	0	32
03F	OT N51					-20	0	1	0	0	30
04F	OT N49 N52					0	15°L / -15°R	1	0	0	12
05F	OT N49 N52					0	-15°L / +15°R	1	0	0	47
06F	OT N49 N52					0	5°L / -5°R	1	0	0	50
07F	OT N49 N52					-20	10°L / -10°R	1	0	0	53
08F	OT N49 N52	↓	↓	↓	↓	0	0	1	0	55	42

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

α OR β SCHEDULES: A = -10° TO +20° IN 5° INCREMENTS

COEFFICENTS

IDVAR (1) IDVAR (2) NDV

TABLE II - Continued

RCS ON

TEST: IA60 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2-20-74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION q_∞	CONTROL DEFLECTION P_c	CONTROL DEFLECTION δ_e	CONTROL DEFLECTION δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{bf}	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{sb}	RUN NO.	TEST RUN NUMBERS
RH1 01N	OT N51	A	0	150	179	15	0		0	0	4	
02N	OT N51	A	0	150	504	15	0		0	0	5	
03N	OT N49N50	A	0	150	167	15	0		0	0	6	
04N	OT N49N50	A	0	150	469	15	0		0	0	7	
05N	OT N49N52	A	0	150	158	15	0		0	0	8	
06N	OT N49N52	A	0	150	446	15	0		0	0	9	
07N	OT N52	A	0	150	158	15	0		0	0	10	
08N	OT N52	A	0	150	446	15	0		0	0	11	
09N	OT N52	A	0	150	158	0	0		0	0	23	
10N	OT N52	A	0	150	446	0	0		0	0	24	
11N	OT N49N52	A	0	150	158	0	0		0	0	20	
12N	OT N49N52	A	0	150	446	0	0		0	0	21	
13N	OT N49	A	0	150	158	0	0		0	0	26	
14N	OT N49	A	0	150	446	0	0		0	0	27	
15N	OT N51	A	0	150	179	0	0		0	0	28	
16N	OT N51	A	0	150	504	0	0		0	0	29	
17N	OT N51	A	0	150	179	-20	0		0	0	31	
18N	OT N51	A	0	150	504	-20	0		0	0	32	
19N	OT N49N50	A	0	150	167	-20	0		0	0	34	
20N	OT N49N50	A	0	150	469	-20	0		0	0	35	

α OR β SCHEDULES: A: -10° TO 100° IN 5° INCREMENTS

TABLE II - Continued

RCS ON

TEST: 1A60 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2-20-74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION T_∞	P_C	δ_e	δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{bf}	δ_{sb}	RUN NO.
RHI 21N	OT N49	A	0	150	158	-20	0		0	0	36
22N	OT N49	A	0	150	446	-20	0		0	0	37
23N	OT N49 NS2	A	0	150	158	-20	0		0	0	38
24N	OT N49 NS2	A	0	150	446	-20	0		0	0	39
25N	OT NS2	A	0	150	158	-20	0		0	0	40
26N	OT NS2	A	0	150	446	-20	0		0	0	41
27N	OT N49 N52	A	0	150	158	0	0		0	55	43
28N	OT N49 NS2	A	0	150	446	0	0		0	55	44
29N	OT N52	A	0	150	158	0	0		0	55	45
30N	OT NS2	A	0	150	446	0	0		0	55	46
31N	OT N49 NS2	A	0	150	158	0	-15L +15R		0	0	48
32N	OT N49 NS2	A	0	150	446	0	-15L +15R		0	0	49
33N	OT N49 NS2	A	0	150	158	0	+5L -5R		0	0	51
34N	OT N49 NS2	A	0	150	446	0	+5L -5R		0	0	52
35N	OT N49 NS2	A	0	150	158	-20	+10L -10R		0	0	54
36N	OT N49 NS2	A	0	150	446	-20	+10L -10R		0	0	55
37N	OT N49 NS2	A	0	150	158	0	+5L -15R		0	0	13
38N	OT N49 NS2	A	0	150	446	0					14
39N	OT N49 N50	A	0	150	167	0					15
40N	OT N49 N50	A	0	150	769	0					17

TEST RUN NUMBERS

α OR β SCHEDULES

TABLE II - Continued

RCS ON

TEST: IA60 | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE: 2-20-74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION ϕ_0	CONTROL DEFLECTION P_L	CONTROL DEFLECTION δ_e	CONTROL DEFLECTION δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{BF}	MACH NUMBERS δ_{SB}	MACH NUMBERS RUN NO	TEST RUN NUMBERS
RH141N	OT N49 N50	A	0	150	167	0	0		0	0	18	
RH142N	"	A	0	150	469	0	0		0	0	19	

α OR β SCHEDULES

TABLE II - Continued

RCS OFF

TEST: OA105 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2/21/74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION q_∞	CONTROL DEFLECTION Pc	CONTROL DEFLECTION δ_e	CONTROL DEFLECTION δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{bf}	δ_{sb}	δ_R	RUN NO.
RH201F	O NS1	A	0	150	OFF	0	0		13.75	55	0	3
02F	O NS2	A	0	150	OFF	0	0		-14.25	55	0	16
03F	O NS1	A	0	150	OFF	0	0		0	55	0	25
04F	O N49NS2	0	B	150	OFF	0	0		0	55	0	28
05F	O N49	A	0	150	OFF	0	0		0	55	0	31
06F	O NS2	A	0	150	OFF	-20	0		0	55	0	34
07F	O N49NS2	A	0	150	OFF	0	+15L -15R		0	55	0	39
08F	O N49NS2	A	0	150	OFF	0	-15L +15R		0	55	0	41
09F	O N49NS2	A	0	150	OFF	0	0		0	0	+20	43
10F	O N49NS2	A	0	150	OFF	0	0		0	0	-20	45

TEST RUN NUMBERS

α OR β SCHEDULES

A = -10° TO +25°, 5° INCREMENTS

B = -5°, -2°, 0°, +2°, +5°

TABLE II - Continued

RCS ON

TEST: OA105 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2/21/74

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION q_∞	CONTROL DEFLECTION Pc	CONTROL DEFLECTION δ_e	CONTROL DEFLECTION δ_a	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δ_{bf}	δ_{sb}	δ_r	RUN NO.	TEST RUN NUMBERS
RH201N	O NS1	A	O	150	72	O	O		13.75	55	O	4	
02N	O NS1	A	O	150	179	O	O		13.75	55	O	5	
03N	O NS1	A	O	150	504	O	O		13.75	55	O	6	
04N	O N49NS2	A	O	150	62	O	O		13.75	55	O	7	
05N	O N49 NS2	A	O	150	158	O	O		13.75	55	O	8	
06N	O N49 NS2	A	O	150	446	O	O		13.75	55	O	9	
07N	O N49	A	O	150	62	O	O		13.75	55	O	10	
08N	O N49	A	O	150	158	O	O		13.75	55	O	11	
09N	O N49	A	O	150	446	O	O		13.75	55	O	12	
10N	O NS2	A	O	150	62	O	O		13.75	55	O	13	
11N	O NS2	A	O	150	158	O	O		13.75	55	O	14	
12N	O NS2	A	O	150	446	O	O		13.75	55	O	15	
13N	O NS2	A	O	150	158	O	O		-14.25	55	O	17	
14N	O NS2	A	O	150	446	O	O		-14.25	55	O	18	
15N	O N49	A	O	150	158	O	O		-14.25	55	O	19	
16N	O N49	A	O	150	446	O	O		-14.25	55	O	20	
17N	O N49NS2	A	O	150	158	O	O		-14.25	55	O	21	
18N	O N49 NS2	A	O	150	446	O	O		-14.25	55	O	22	
19N	O NS1	A	O	150	179	O	O		-14.25	55	O	23	
20N	O NS1	A	O	150	504	O	O		-14.25	55	O	24	

α OR β SCHEDULES: A = -10° TO +25° 5° INCREMENTS
B = -5°, -2°, 0°, +2°, +5°

TABLE II - Concluded

RCS ON

TEST: 0A105 — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 2/22

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	CONTROL DEFLECTION q_∞	CONTROL DEFLECTION P_c	CONTROL DEFLECTION δe	CONTROL DEFLECTION δa	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE) δbf	δsb	δr	RUN NO.	TEST RUN NUMBERS
RH2 21N	O NS1	A	0	150	504	0	0		0	55	0	26	
22N	O N49 NS2	A	0	150	446	0	0		0	55	0	27	
23N	O N49 NS2	0	B	150	446	0	0		0	55	0	29	
24N	O N49	A	0	150	446	0	0		0	55	0	30	
25N	O N49	A	0	150	158	0	0		0	55	0	32	
26N	O NS2	A	0	150	446	0	0		0	55	0	33	
27N	O NS2	A	0	150	446	-20	0		0	55	0	35	
28N	O N49	A	0	150	446	-20	0		0	55	0	36	
29N	O N49 NS2	A	0	150	446	-20	0		0	55	0	37	
30N	O NS1	A	0	150	504	-20	0		0	55	0	38	
31N	O N49 NS2	A	0	150	158	0	+15L −15R		0	55	0	40	
32N	O N49 NS2	A	0	150	158	0	−15L +15R		0	55	0	42	
33N	O N49 NS2	A	0	150	158	0	0		0	0	+20	44	
34N	O N49 NS2	A	0	150	158	0	0		0	0	-20	46	
35N	O NS1	25	0	150	C	0	0		0	55	0	50	
36N	O N49 NS0	25	0	150	C	0	0		0	55	0	49	
37N	O N49 NS0	25	0	75	C	0	0		0	55	0	48	
38N	O NS1	25	0	75	C	0	0		0	55	0	47	

α OR β SCHEDULES: A = −10° TO +25° IN 5° INCREMENTS; B = −5°, −2°, 0°, +2°, +5°

P_c^2 C = 0, 100, 200, 300, 400, 500 psfa

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT_{21}

GENERAL DESCRIPTION: Attach structure, same as AT_{11} except only the forward attach structure.

MODEL SCALE: 0.010

DRAWING NO.: VL72-000089

DIMENSIONS:	FULL SCALE	MODEL SCALE
Orbiter to Tank		
Location- In.		
X_T	382.000	3.820
X_T	1133.000	11.330

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT_{22}

GENERAL DESCRIPTION: Right rear, Orbiter to External Tank

MODEL SCALE: 0.010

DRAWING NO.: VL72-000088B + VL72-000089 NOTE: Use first drawing for location and second drawing for detail of struts

DIMENSIONS:	FULL SCALE	MODEL SCALE
First strut		
Diameter - In. (Approx.)	8.0	0.08
Aft Location, In. (Attach to Orbiter)		
X_o	1307.0	13.070
X_T	2058.0	20.580
Fwd Location - In. (Approx.) (Attach to Orbiter)		
X_o	1108.0	11.080
X_T	1859	18.59
NOTE: This strut is the mirror image strut AT_{23}		
Second Strut		
Diameter, In. (Approx.)	8.0	0.08
Location - In.		
X_o	1307.0	13.070
X_T	2058	20.580
NOTE: This is a cross brace strut.		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT_{23}

GENERAL DESCRIPTION: Left rear, Orbiter to External Tank

MODEL SCALE: 0.010

DRAWING NO.: VL72-000088B & VL72-000089

NOTE: Use first drawing for location and second drawing for detail of struts

DIMENSIONS:	FULL SCALE	MODEL SCALE
Forward attach points:		
Orbiter to Tank		
No. of struts	1	1
Diameter - In. (Approx)	8.0	0.08
Location - In.		
X_o	1307	13.070
X_T	2058	20.580
Aft attach points:		
Location - In. (Approx.)		
X_o	1108	11.080
X_T	1859	18.590

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY - B_{19}

GENERAL DESCRIPTION : Fuselage, Configuration 3 per Rockwell Lines VL70-000139B.

NOTE: Identical to B_{17} except forebody.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000139B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	1290.3	12.903
Max Width - In.	267.6	2.676
Max Depth - In.	244.5	2.445
Fineness Ratio	4.82175	4.82175
Area - Ft^2		
Max. Cross-Sectional	386.67	0.0387
Planform		
Wetted		
Base		

TABLE III. -MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : CANOPY - C_7

GENERAL DESCRIPTION : Configuration 3 per Rockwell Lines VL70-000139.

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (X_o=433 to X_o=578) In.F.S.	145	1.450
Max Width		
Max Depth		
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ELEVON - E_{23}

GENERAL DESCRIPTION: Configuration 3 per W_{107} Rockwell Lines Drawing VL70-000139B. Data for (1) of (2) sides.

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000139B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft^2	205.52	0.0206
Span (equivalent) - In.	353.34	3.533
Inb'd equivalent chord - In.	114.78	1.148
Outb'd equivalent chord - In.	55.00	0.550
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.208	0.208
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	0.00	0.00
Trailing Edge	10.24	- 10.24
Hingeline	0.00	0.00
Area Moment (Normal to hinge line) - Ft^3	1548.07	0.00155

TABLE III.- MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : BODY FLAP- F_5

GENERAL DESCRIPTION : 3 Configuration per Rockwell Lines VL70-000139

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000139

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	84.70	0.847
Max Width - In.	267.6	2.676
Max Depth		
Fineness Ratio		
Area - Ft^2		
Max. Cross-Sectional		
Planform	142.5	0.0143
Wetted		
Base	38.0958	0.0038

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FEEDLINE - FL-7

GENERAL DESCRIPTION: LOX feedline between ET and Orbiter

MODEL SCALE: 0.010

DRAWING NO.: VL78-000050

DIMENSIONS:

		FULL SCALE	MODEL SCALE
Centerline at:	X_T	2081.0	20.810
	Y_T	70.0	0.70
	X_o	1330.0	13.300
	Y_o	70.0	0.700
Diameter		18.5	0.185

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: FEEDLINE - FL_8

GENERAL DESCRIPTION: LH_2 feedline between ET and Orbiter

MODEL SCALE: 0.010

DRAWING NUMBER: VL78-000050

DIMENSIONS:		FULL SCALE	MODEL SCALE
Centerline at:	X_T	2081.0	20.810
	Y_T	- 70.0	- 0.700
	X_o	1330.0	13.300
	Y_o	- 70.0	- 0.700
Diameter		18.5	0.185

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : OMS POD - M_6

GENERAL DESCRIPTION : Basic configuration 3A OMS pods with non-metric RCS engine housing and nozzles. Same geometry as M_4

MODEL SCALE: 0.010

DRAWING NUMBER : VL70-000139B

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length - In.	346.0	3.460
Max Width - In.	108.0	1.080
Max Depth - In.	113.0	1.130
Fineness Ratio		
Area		
Max. Cross-Sectional		
Planform		
Wetted		
Base		
Station of aft end of RCS nozzle block	1560.0	15.600

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: MPS NOZZLES - N_{39}

GENERAL DESCRIPTION: Configuration 3A MPS Nozzles

MODEL SCALE: 0.010

DRAWING NUMBER:

DIMENSIONS:		FULL SCALE		MODEL SCALE
MACH NO.				
Length - In.				
Gimbal Point to Exit Plane				
Throat to Exit Plane				
Diameter - In.				
Exit		94.000		0.940
Throat				
Inlet				
Area - ft^2				
Exit		48.193		0.0048
Throat				
Gimbal Point (Station) - In.				
Upper Nozzle				
X				
Y				
Z				
Lower Nozzles				
X		1462.0		14.620
Y	±	53.000	±	0.530
Z		342.7		3.427
Null Position - Deg.				
Upper Nozzle				
Pitch				
Yaw				
Lower Nozzle				
Pitch				
Yaw				

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RCS NOZZLE - N_{49}

GENERAL DESCRIPTION: RCS nozzle providing left-hand pitch-down control to simulate return to launch site (RTLS)

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-19

DIMENSIONS:	FULL SCALE	MODEL SCALE
Flight dynamic pressure simulation - PSF	20	20
Cant angle - Deg.		
Aft	12	12
Outboard	20	20
Diameter - In.		
Exit	14.10	0.141
Throat	6.70	0.0670
Area - In^2		
Exit	156.14	0.015614
Throat	35.25	0.003525
Area ratio	4.430	4.430
No. of Nozzle	2	2

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RCS Nozzles - N_{50}

GENERAL DESCRIPTION: RCS Nozzle providing right-hand pitch-down control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-20

DIMENSIONS:	FULL SCALE	MODEL SCALE
Flight dynamic pressure simulation - PSF	20	20
Cant angle - deg.		
Aft	12	12
Outboard	20	20
Diameter - In.		
Exit	14.10	0.141
Throat	6.70	0.0670
Area - $In.^2$		
Exit	15.614	0.015614
Throat	35.25	0.003525
Area Ratio	4.430	4.430
No. of Nozzles	2	2

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RCS NOZZLES - N_{51}

GENERAL DESCRIPTION: RCS Nozzle providing left-hand yaw control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-11

DIMENSIONS:

	MODEL SCALE
Flight dynamic pressure simulation- PSF	20
Cant angle - Deg.	
Aft	0
Outboard	0
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - $In.^2$	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	4

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RCS NOZZLE - N_{52}

GENERAL DESCRIPTION: RCS Nozzle providing right-hand pitch-up control to simulate return to launch site (RTLS).

MODEL SCALE: 0.010

DRAWING NO.: SS-A01160-12

DIMENSIONS:	MODEL SCALE
Flight dynamic pressure simulation - PSF	20
Cant angle- deg.	
Aft	0
Outboard	0
Diameter - In.	
Exit	0.141
Throat	0.0670
Area - $In.^2$	
Exit	0.015614
Throat	0.003525
Area ratio	4.430
No. of nozzles	2

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ET PROTUBERANCE - PT_{16}

GENERAL DESCRIPTION: LOX vent line fairing

MODEL SCALE: 0.010

DRAWING NO.: VL78-000031A

DIMENSIONS:	FULL SCALE	MODEL SCALE
Leading edge at X_T	322.0	3.210
Y_T	0.0	0.0
Trailing edge at X_T	955.0	9.55
Y_T	70.0	0.70

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ET PROTUBERANCE- PT_{17}

GENERAL DESCRIPTION: LOX feedline fairing

MODEL SCALE: 0.010

DRAWING NO.: VL78-000031A

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	955.0	9.55
	Y_T	70.0	0.70
Trailing edge at:	X_T	2058.0	20.58
	Y_T	70.0	0.70

TABLE III.- MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: ET PROTUBERANCE - PT_{18}

GENERAL DESCRIPTION: LH_2 vent line fairing

MODEL SCALE: 0.010

DRAWING NO.: VL78-000031A

DIMENSIONS:		FULL SCALE	MODEL SCALE
Leading edge at:	X_T	947.0	9.47
	Y_T	- 70.0	- 0.70
Trailing edge at:	X_T	2058.0	20.58
	Y_T	- 70.0	- 0.700

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: RUDDER - R_5

GENERAL DESCRIPTION: 2A, 3, 3A and 140A/B configurations

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000146A, VL70-000095, VL70-000139

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Area - Ft^2	106.38	0.011
Span (equivalent) - In.	201.0	2.010
Inb'd equivalent chord - In.	91.585	0.916
Outb'd equivalent chord - In.	50.833	0.508
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.83	34.83
Trailing Edge	26.25	26.25
Hingeline	34.83	34.83
Area Moment (Normal to hinge line) - Ft^3	526.13	0.00053

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT : EXTERNAL TANK - T_{10}

GENERAL DESCRIPTION : External Oxygen-Hydrogen Tank, 3 configuration, per Rockwell Lines drawing VL78-000041 and VL72-000088

MODEL SCALE: 0.010

DRAWING NUMBER : VL72-000088, VL78-000041

DIMENSIONS :	FULL SCALE	MODEL SCALE
Length (Nose @ X_T = 309)	1865	18.65
Max Width - In.	324	3.24
Max Depth	--	
Fineness Ratio	5.75617	5.75617
Area Ft^2		
Max. Cross-Sectional	572.555	0.0573
Planform		
Wetted		
Base		
W.P. of tank centerline (X_T) In.	400.0	4.000

TABLE III. - MODEL DIMENSIONAL DATA - Continued.

MODEL COMPONENT: VERTICAL - V_7

GENERAL DESCRIPTION: Centerline vertical tail, double-wedge airfoil with rounded leading edge.

NOTE: Same as V_5, but with manipulator housing removed.

MODEL SCALE: 0.010

DRAWING NUMBER: VL70-000139

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) - Ft^2		
Planform	425.92	0.0426
Span (Theo) - In.	315.72	3.157
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep-Back Angles, Degrees.		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.50	2.685
Tip (Theo) WP	108.47	1.085
MAC	199.81	1.998
Fus. Sta. of .25 MAC	1463.50	14.635
W.P. of .25 MAC	635.522	6.355
B.L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle - Deg.	10.000	10.000
Trailing Wedge Angle - Deg.	14.920	14.920
Leading Edge Radius	2.0	0.02
Void Area - Ft^2	13.17	0.0013
Blanketed Area	0.00	0.00

TABLE III. - MODEL DIMENSIONAL DATA - Concluded.

MODEL COMPONENT: WING-W_{107}

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139B

NOTE: Same as W_{103} except cuff, airfoil and incidence angle.

MODEL SCALE: 0.010

TEST NO.

DWG. NO. VL70-000139B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2 Planform	2690.0	0.269
Span (Theo In.	936.68	9.367
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees	+ 3.000	+ 3.000
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	- 10.24	- 10.24
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	689.24	6.892
Tip, (Theo) B.P.	137.85	1.379
MAC	474.81	4.748
Fus. Sta. of .25 MAC	1136.89	11.368
W.P. of .25 MAC	299.20	2.992
B.L. of .25 MAC	182.13	1.821
EXPOSED DATA		
Area (Theo) Ft^2	1752.29	0.1752
Span, (Theo) In. BP108	720.68	7.207
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords		
Root BP108	562.40	5.624
Tip 1.00 $\frac{b}{2}$	137.85	1.379
MAC	393.03	3.930
Fus. Sta. of .25 MAC	1185.31	11.853
W.P. of .25 MAC	300.20	3.002
B.L. of .25 MAC	251.76	2.518
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root $\frac{b}{2}$ =	0.10	0.10
Tip $\frac{b}{2}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff Planform Area Ft^2	118.333	0.0118
Leading Edge Intersects Fus M. L. @ Sta	500.0	5.000
Leading Edge Intersects Wing @ Sta	1083.4	10.834

TABLE IV.

JET COEFFICIENTS

JET COEFFICIENT	IA60		OA105/OA85		
	q = 7 PSF T = 953 #/JET	q = 20 PSF T = 965 #/JET	q = 7 PSF T = 953 #JET	q = 20 PSF T = 965 #/JET	q = 50 PSF T = 950 #/JET
C_{NJD}	.1866	.06612	.1866	.06612	.02604
C_{NJU}	-.1012	-.03588	-.1012	-.03588	-.01413
C_{YJS}	.2025	.07176	.2024	.07175	.02825
C_{mJU}	.04317	.0153	.09556	.03387	.01334
C_{mJD}	-.08392	-.02974	-.1817	-.06440	-.02536
C_{nJS}	-.08728	-.03093	-.09819	-.03480	-.01370
$C_{\ell JU}$	.01036	.003671	.01426	.005056	.001991
$C_{\ell JD}$	.01182	.004189	.01358	.004814	.001896
$C_{\ell JU/D}$	.02218	.00786	.02785	.009869	.003886

Subscripts:

JD - Down

JU - Up

JS - Side

JU/D - Combined up and down

Notes:

1. Positive directions of force cofficients, moment coefficients, and angles are indicated by arrow
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity

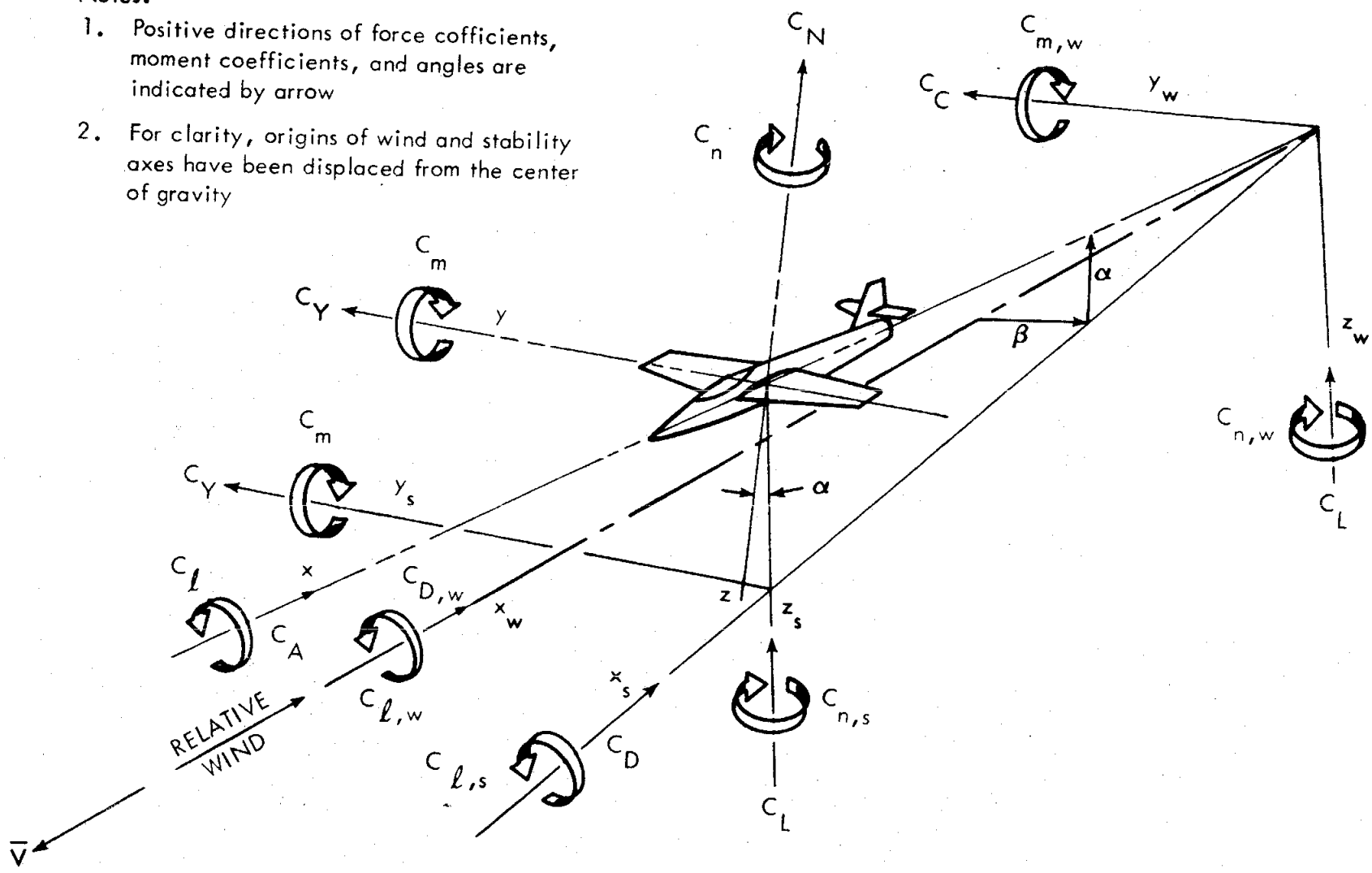
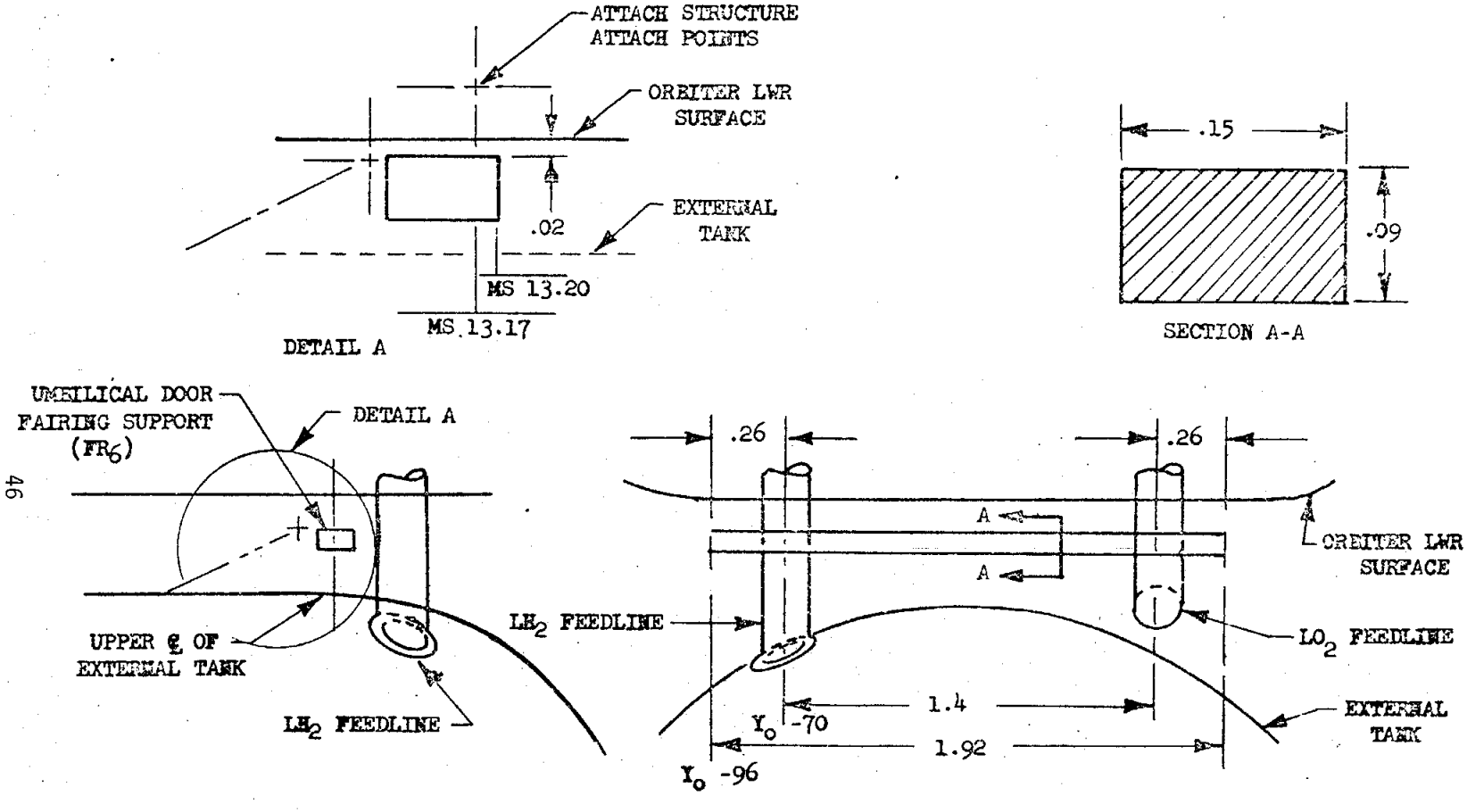


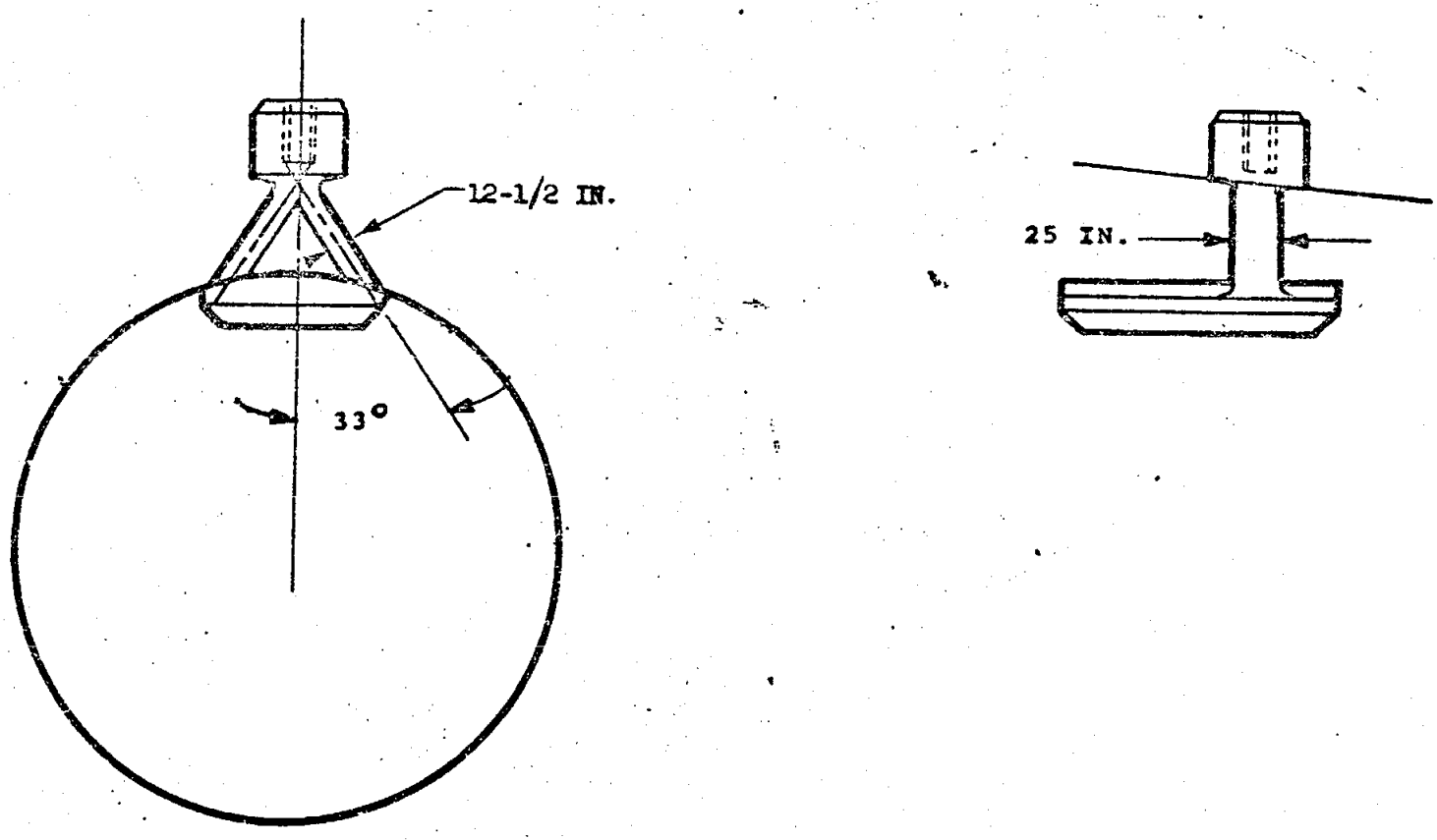
Figure 1. - Axis systems.



NOTE: ALL DIMENSIONS ARE APPROXIMATE AND IN INCHES

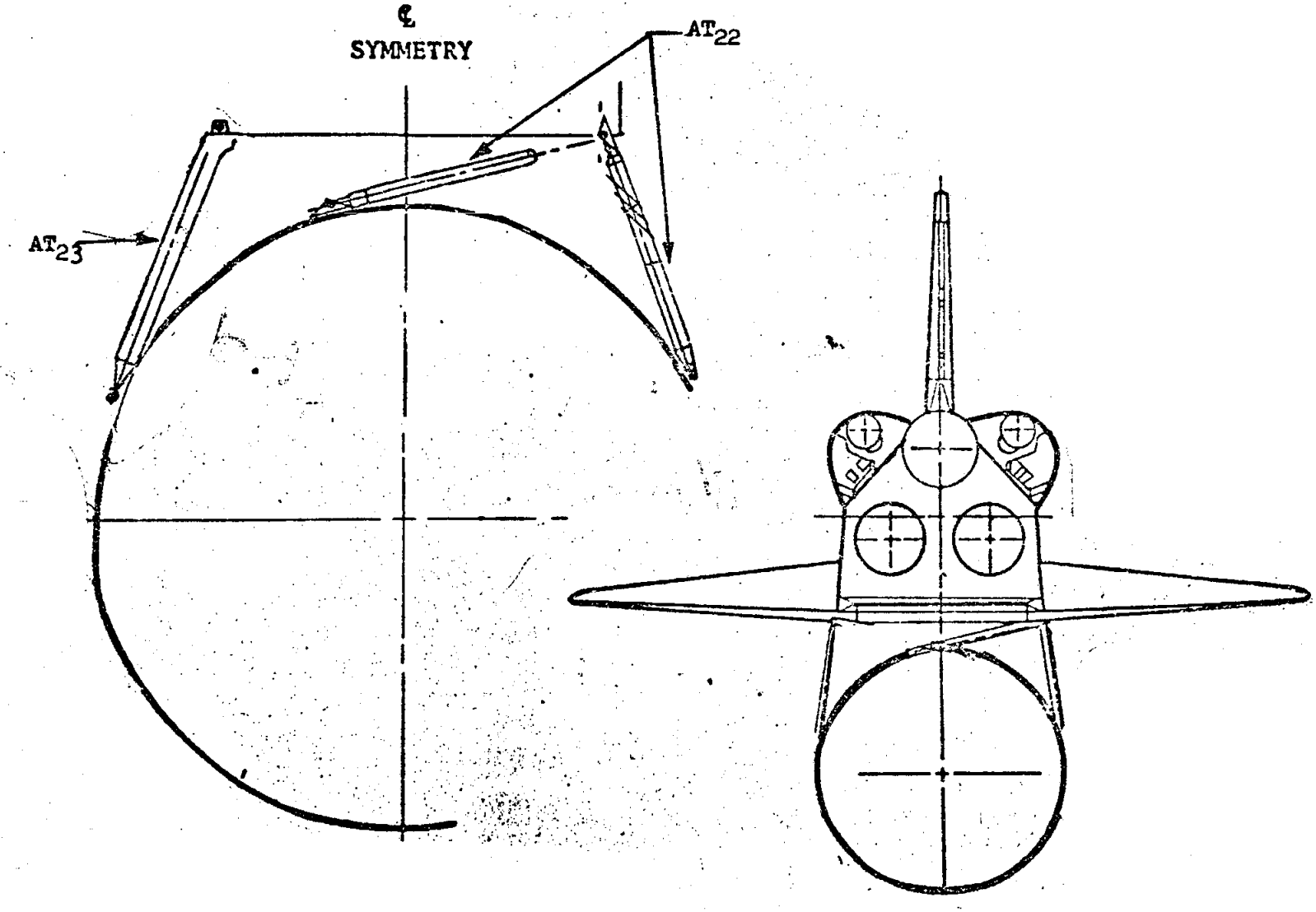
a. Orbiter umbilical door fairing support (FR_6) and $LO_2(FL_7)$ and $LH_2(FL_8)$ Feedlines

Figure 2. - Model Sketches.



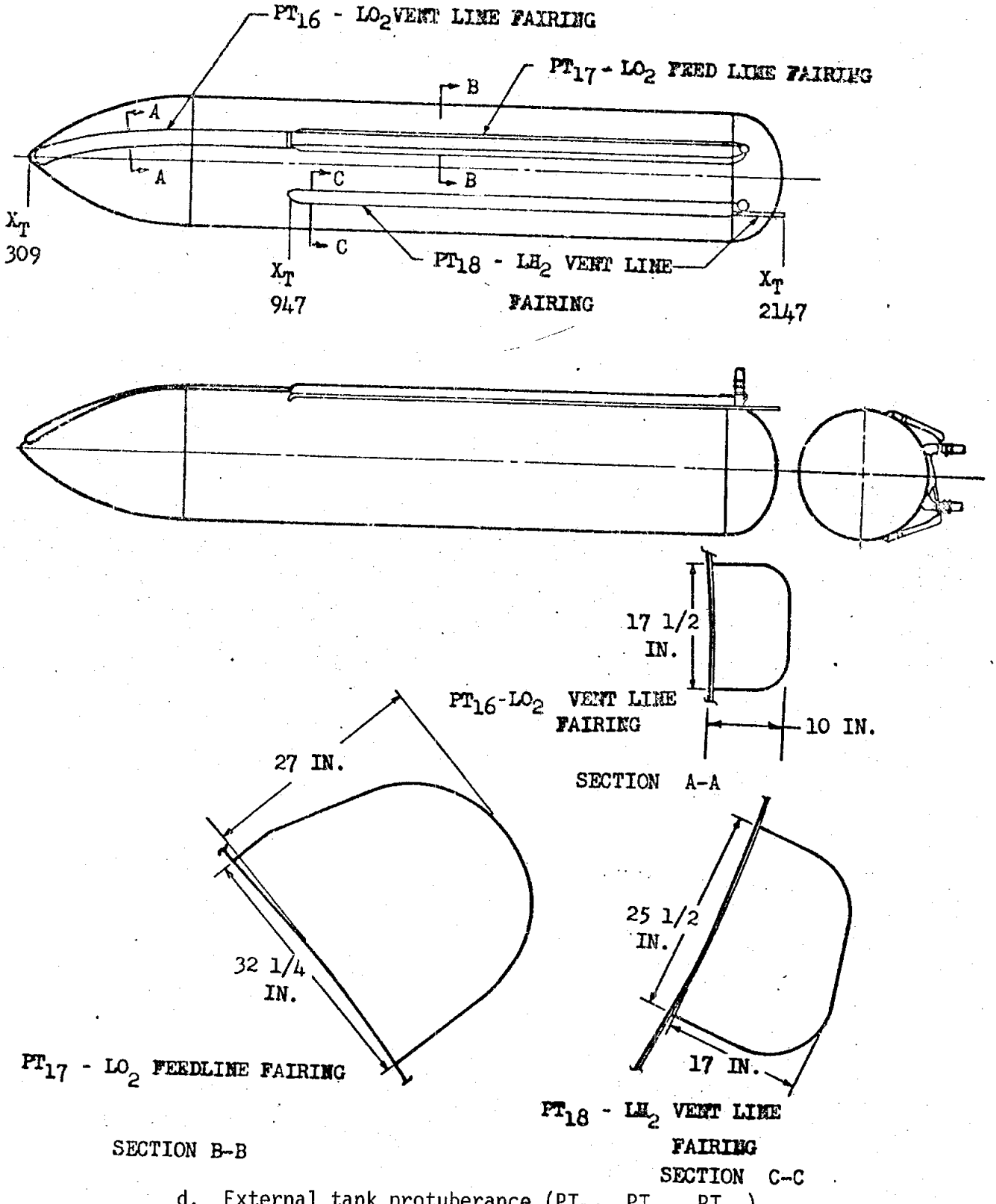
b. Forward attachment of the external tank to the orbiter (AT_{21})

Figure 2. - Continued.



c. Aft attachment of external tank to orbiter ($AT_{22,23}$)

Figure 2. - Continued.



d. External tank protuberance (PT_{16}, PT_{17}, PT_{18})

Figure 2. - Concluded.

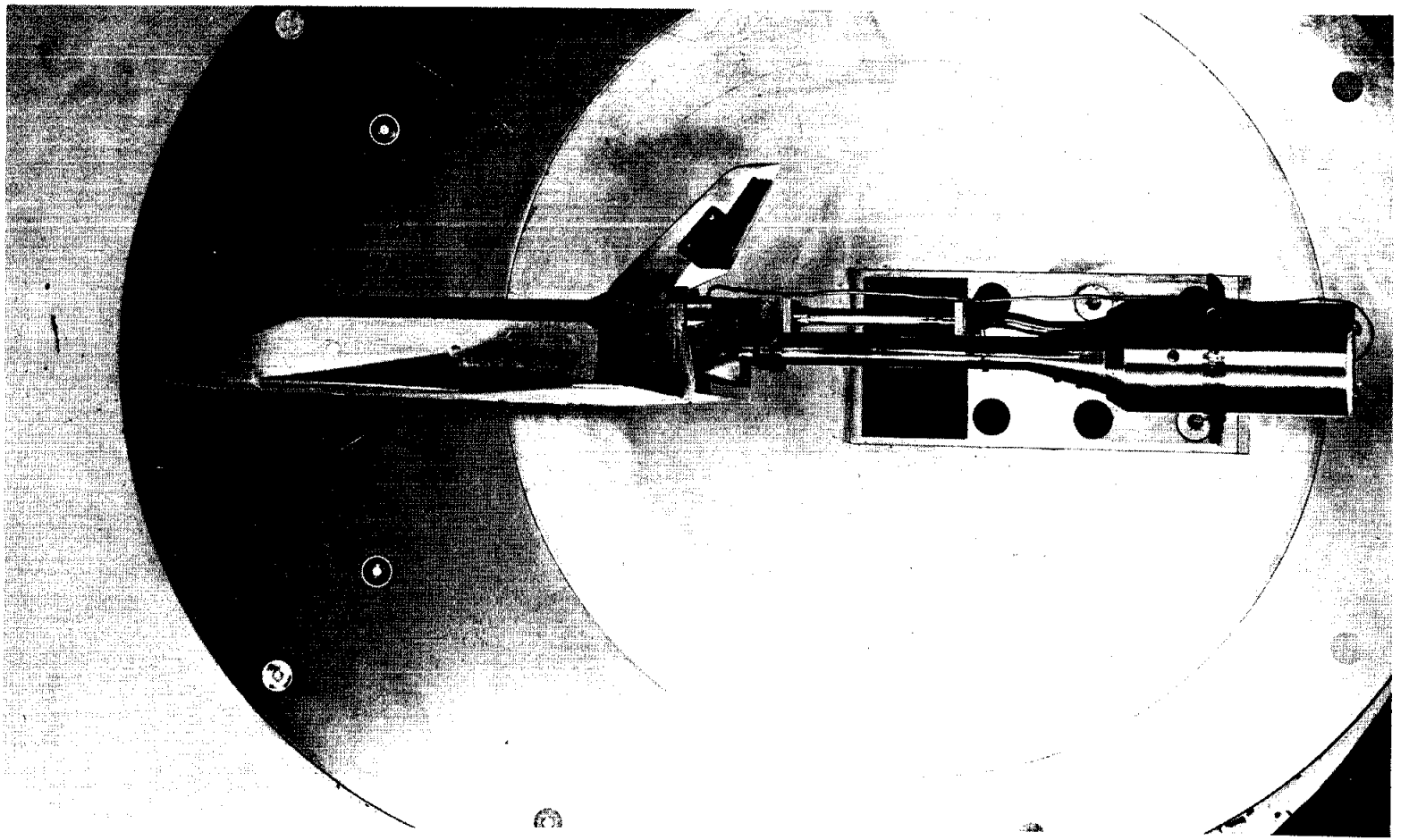


Figure 3. Model Installation Photograph

DATA FIGURES

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1009)	○	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	.000	167.000	20.000	.000
(CQ1001)	□	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	15.000	167.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	IN

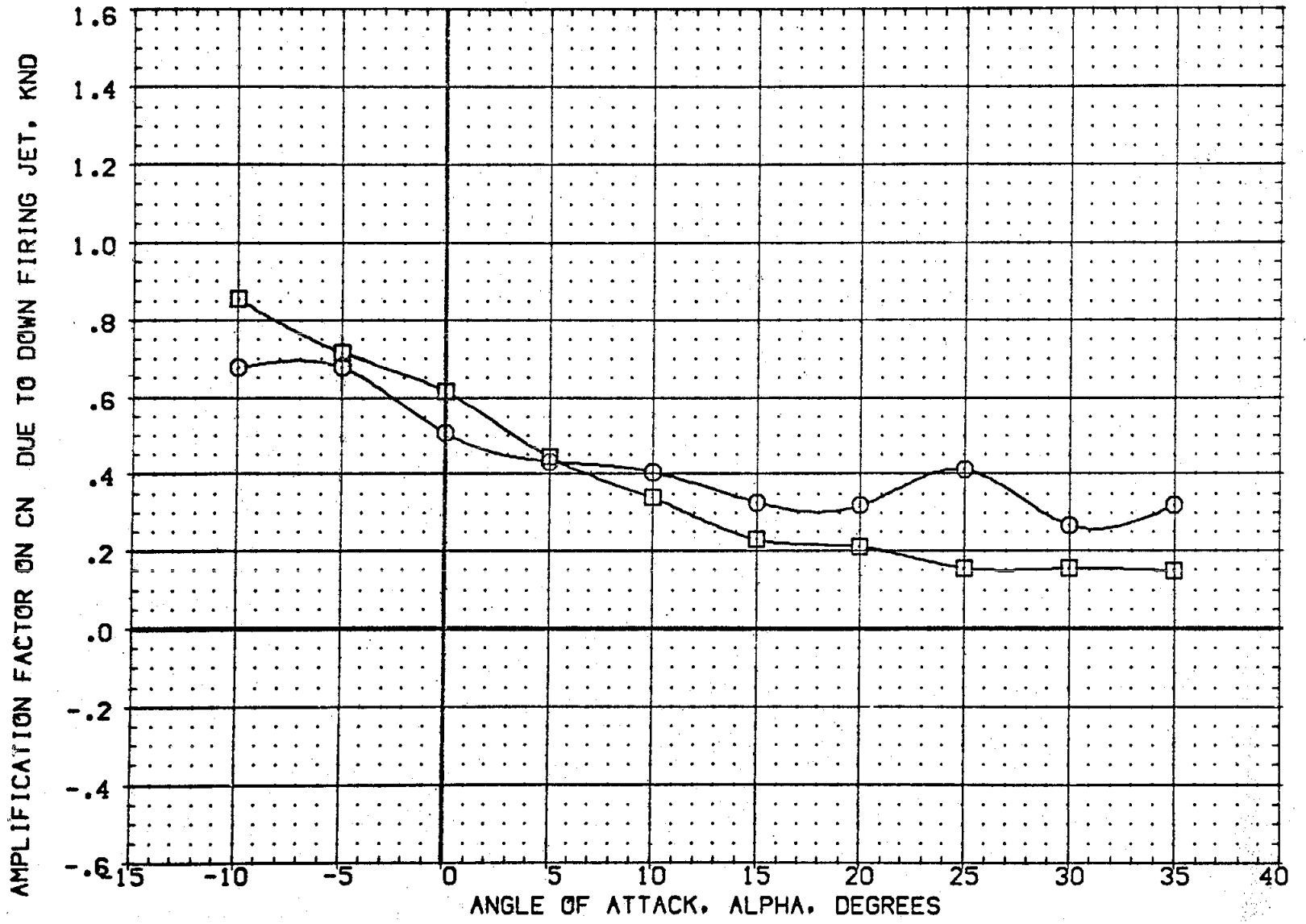


FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1009) ○	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	.000	167.000	20.000	.000
(CQ1001) □	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	15.000	167.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

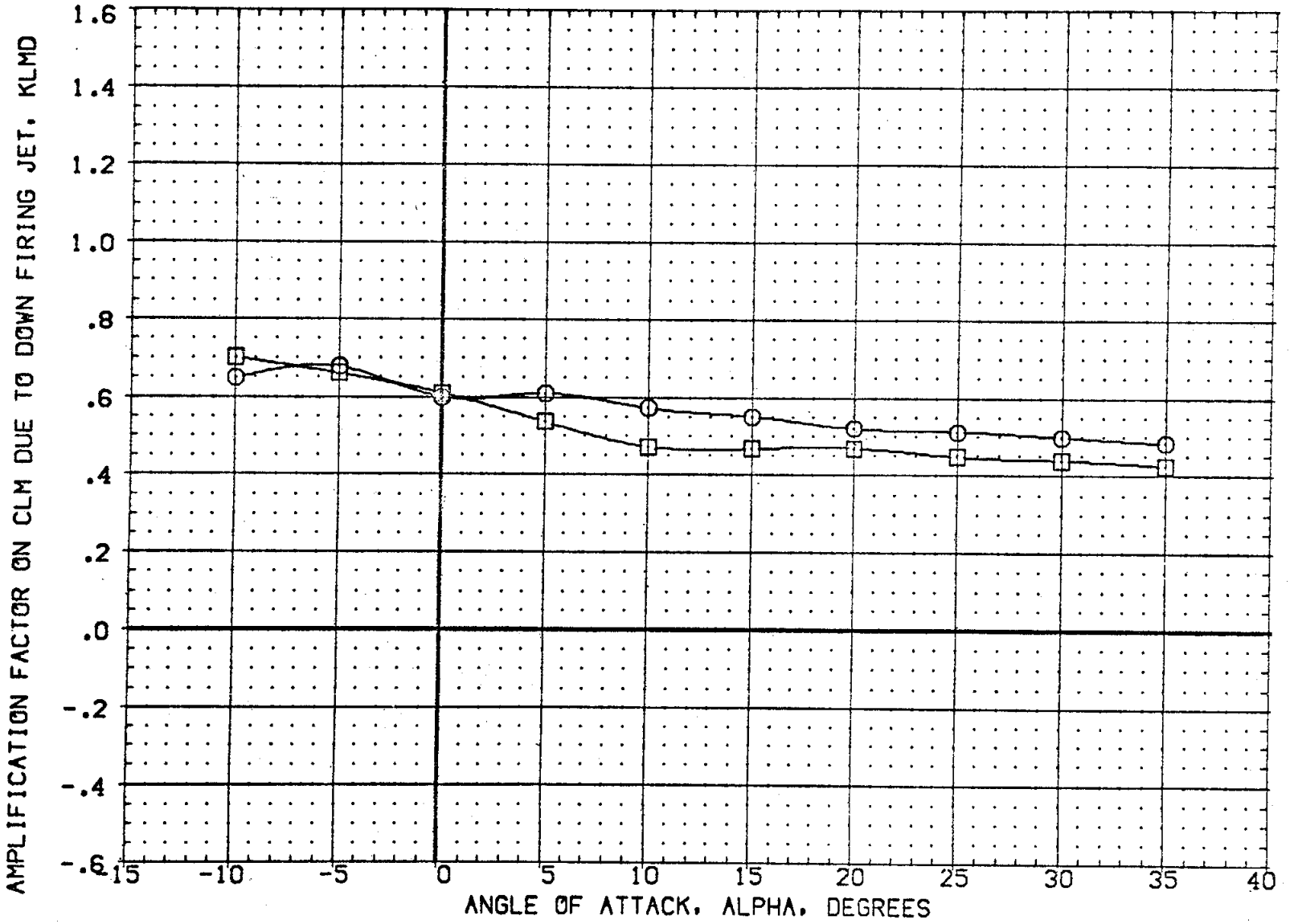


FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(CQ1009) ○ 0A-8S CFHT101 MODEL 32-0 0IN49N50 PITCH DOWN

(CQ1001) □ 0A-8S CFHT101 MODEL 32-0 0IN49N50 PITCH DOWN

ELEVON	PCRCS	Q-SIM	BDFLAP
.000	167.000	20.000	.000
15.000	167.000	20.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1009) ○	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	.000	167.000	20.000	.000
(CQ1001) □	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	15.000	167.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	IN

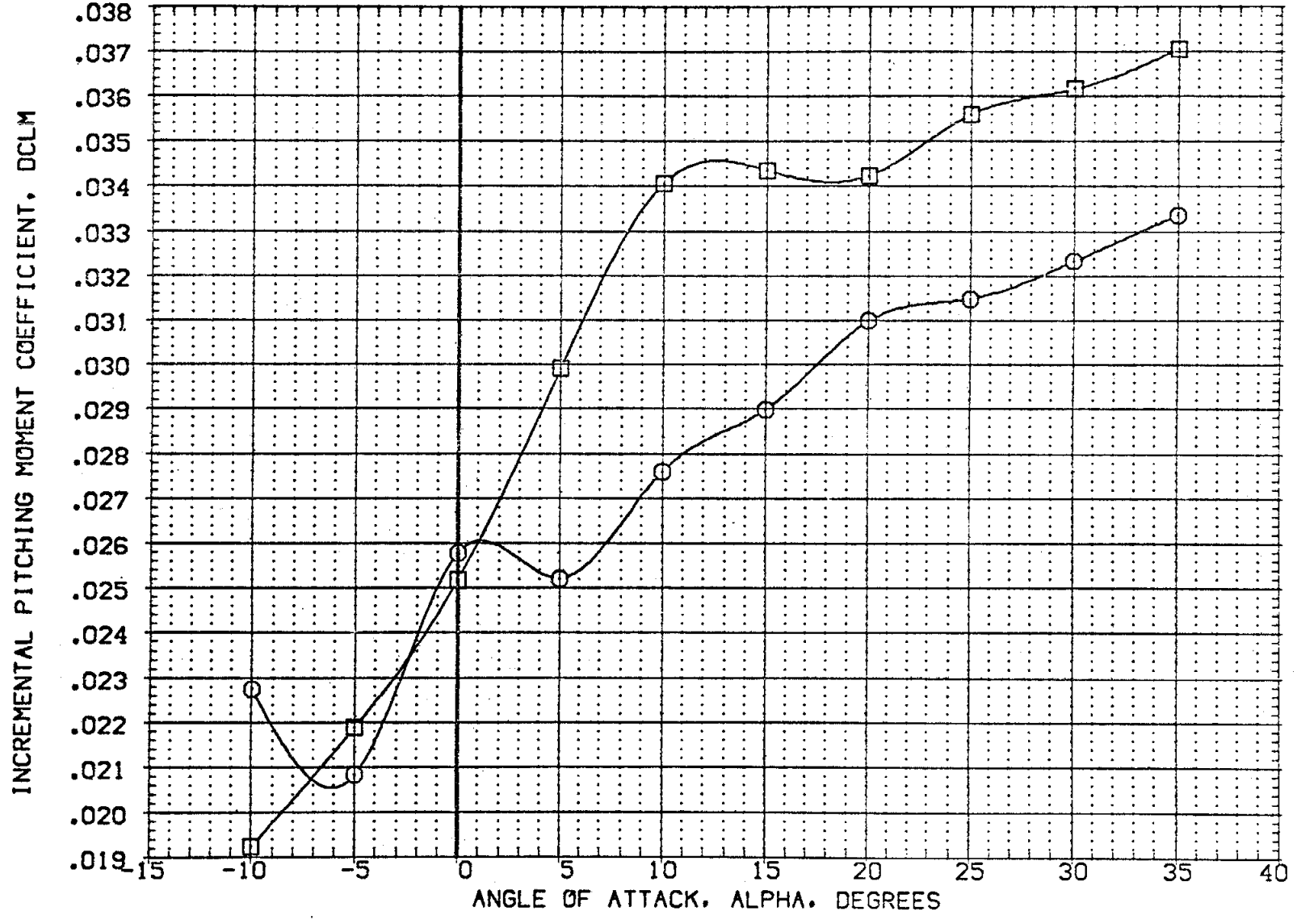


FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZQ109N)	○	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN		.000	167.000	20.000	.000
(ZQ101N)	□	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN		15.000	167.000	20.000	.000
(ZQ103F)	◇	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZQ101F)	△	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

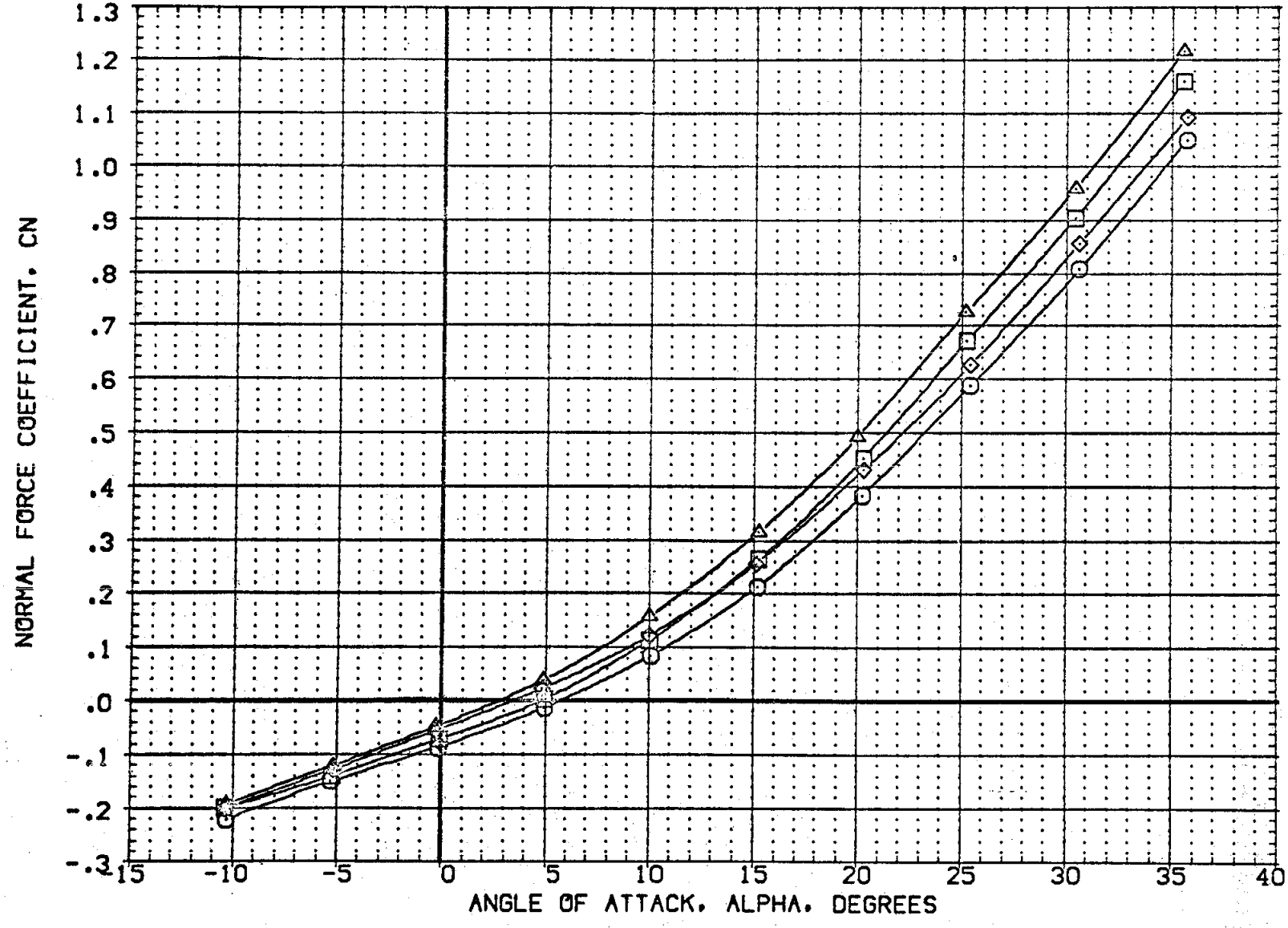


FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ELEVON	PCRCS	Q-SIM	BDFLAP
(ZQ109N) ○	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	.000	167.000	20.000	.000
(ZQ101N) □	0A-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN	15.000	167.000	20.000	.000
(ZQ1C3F) ◇	0A-85 CFHT101 MODEL 32-0 01 N52 RCS OFF	.000	.000	.000	.000
(ZQ101F) △	0A-85 CFHT101 MODEL 32-0 01 N49 N50 RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	IN

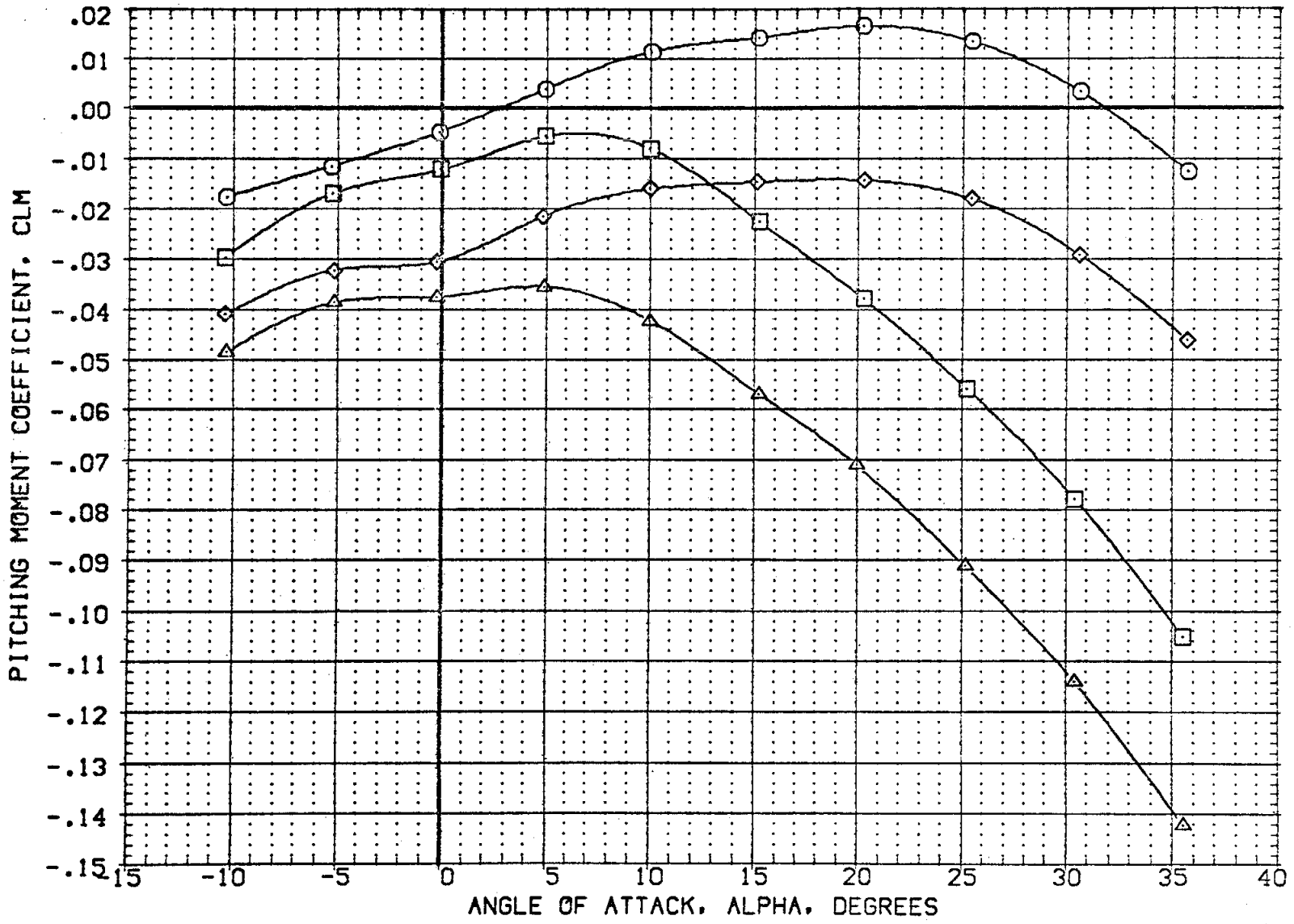


FIG 4 EFFECT OF ELEVON DEFLECTION ON N49N50 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2027)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

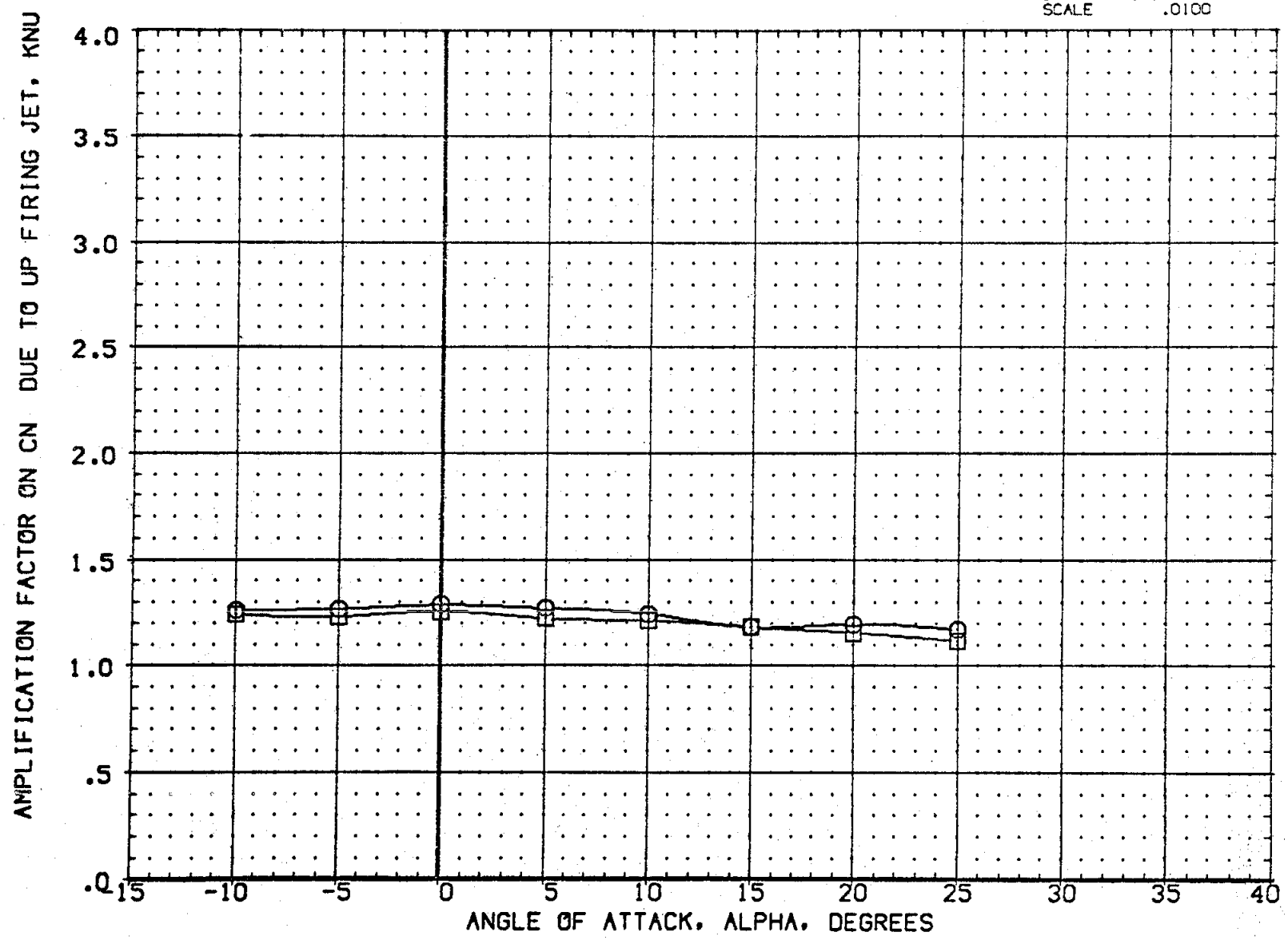


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026) □	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

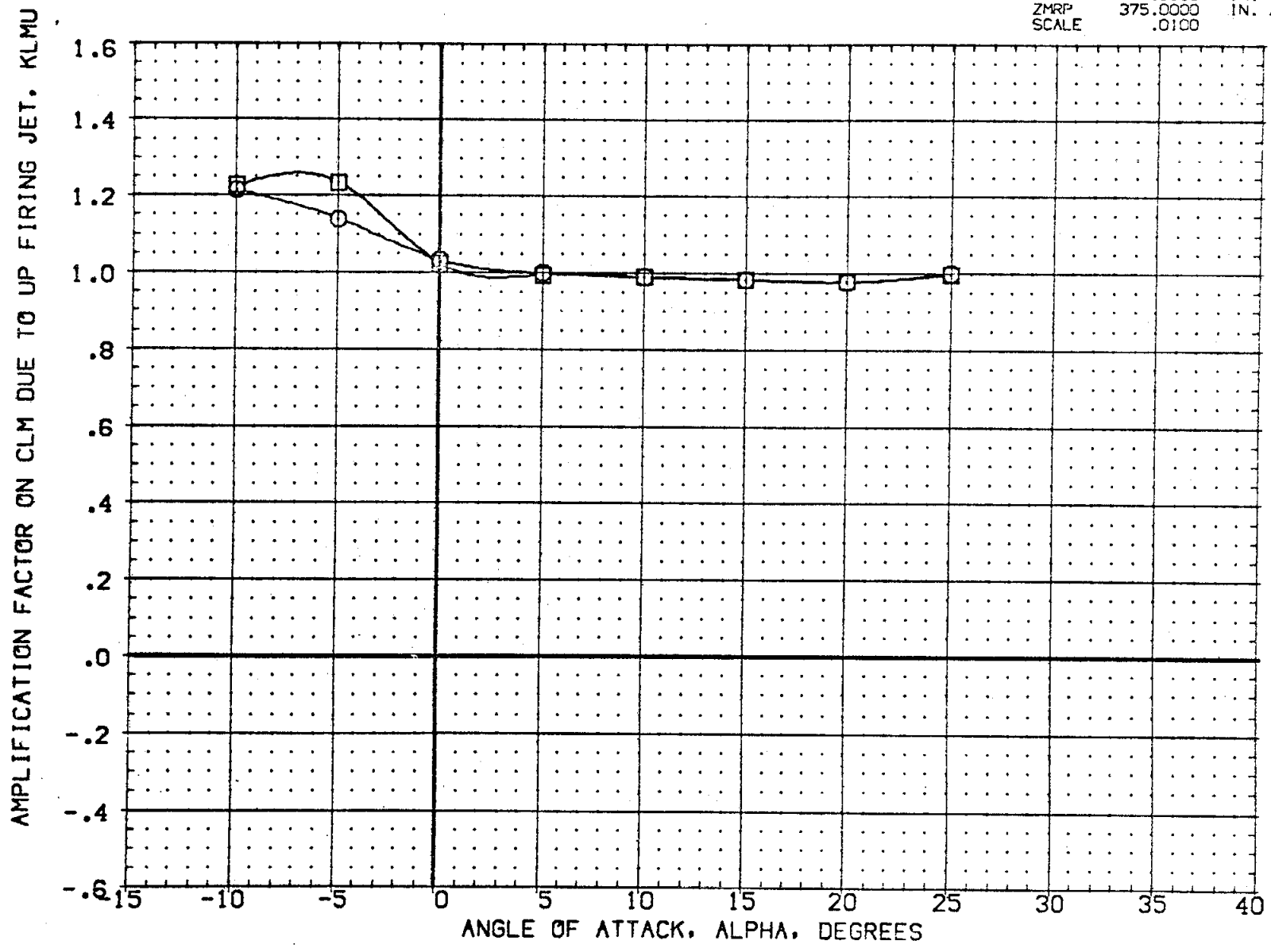


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

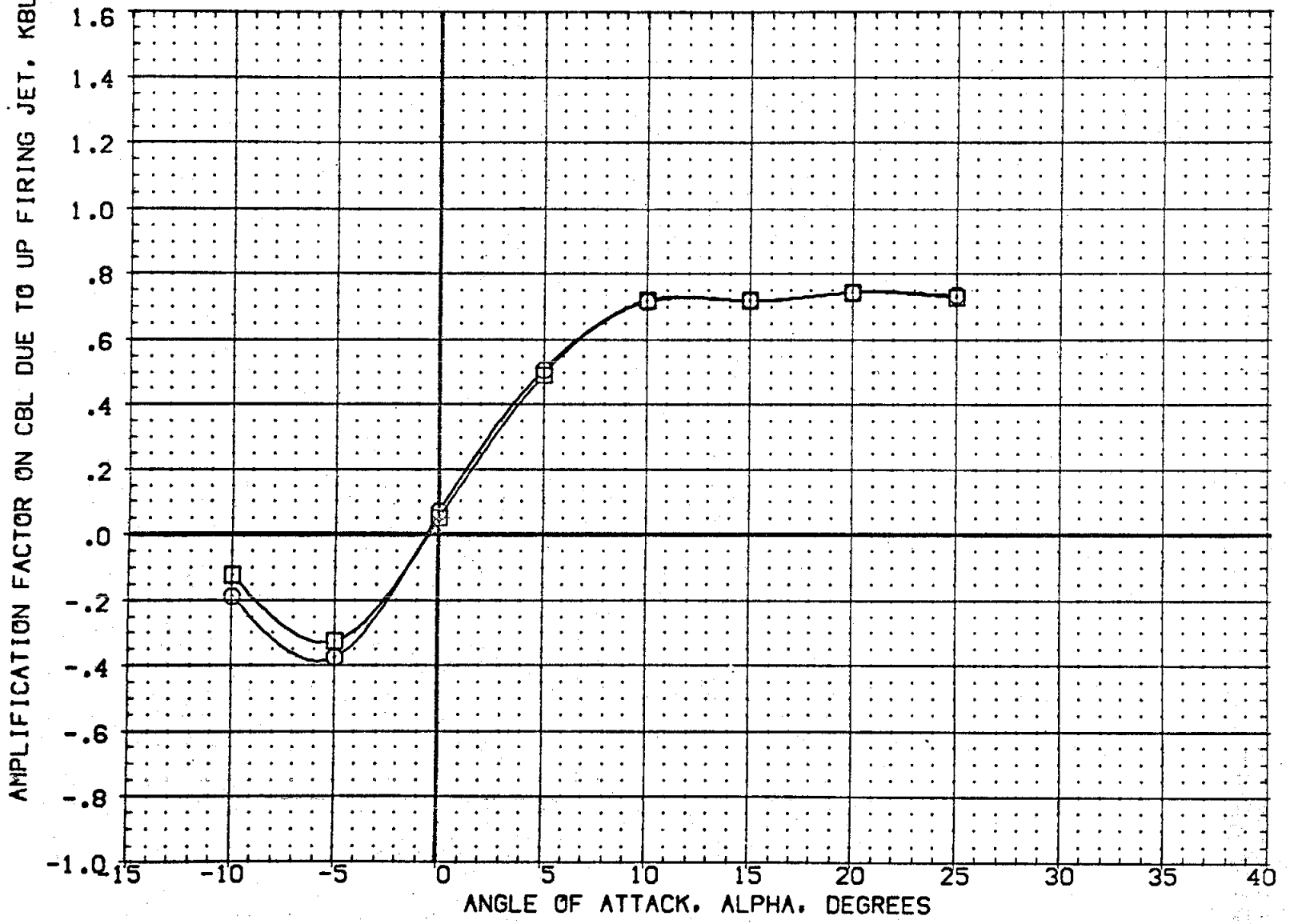


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

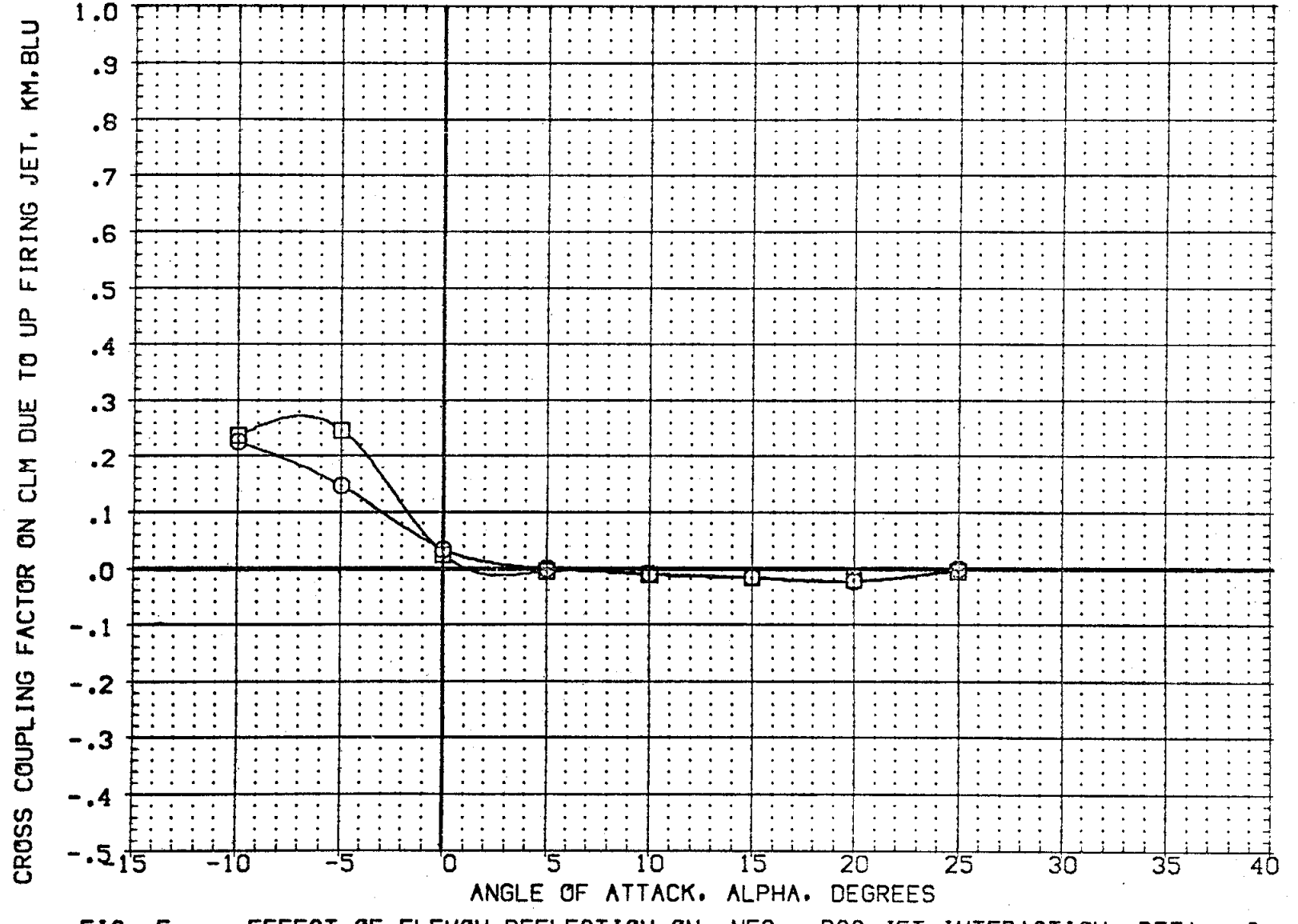


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2027)	○	0A10S CFHT10S MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A10S CFHT09 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

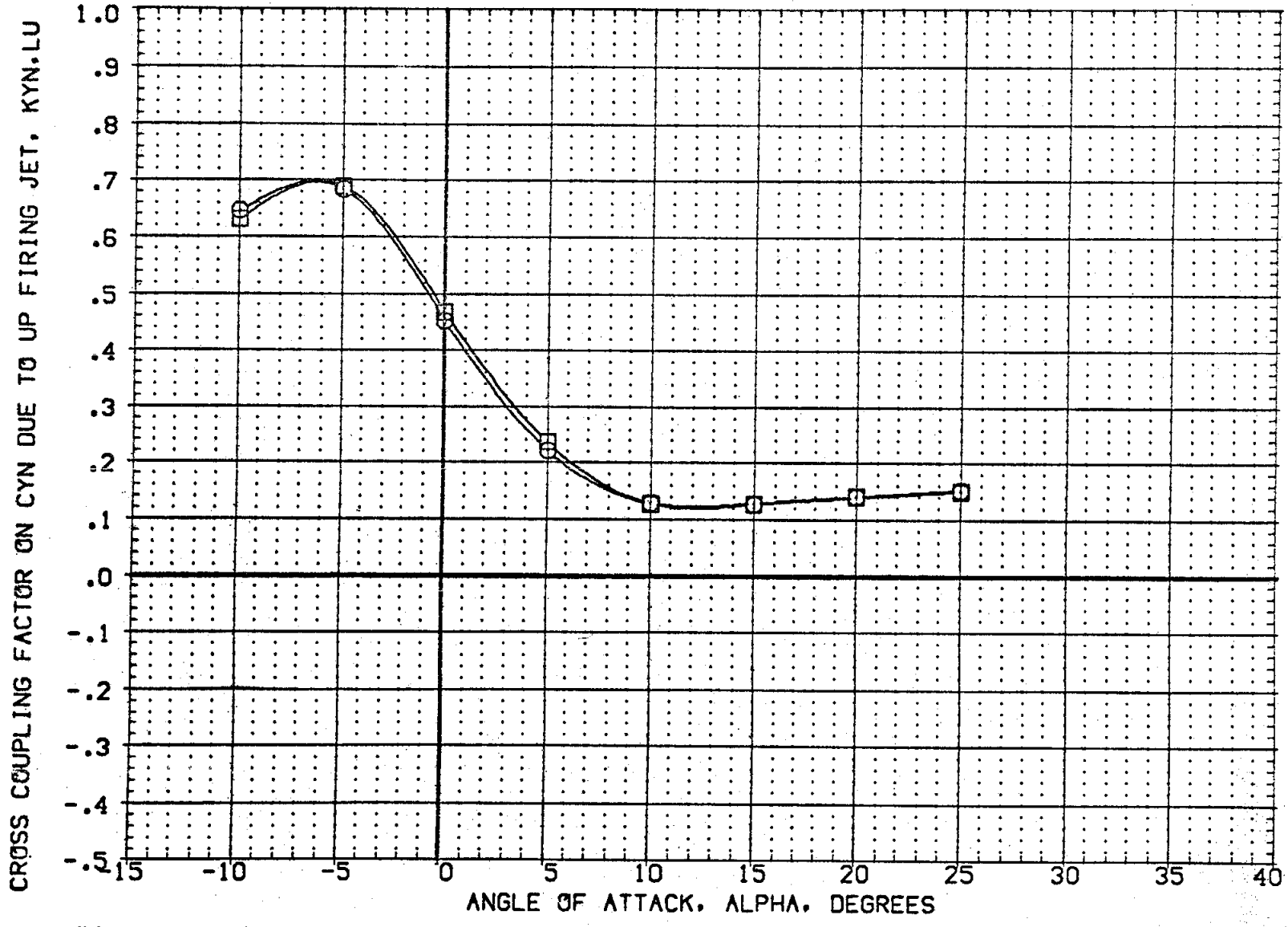


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A105 CFHT105 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

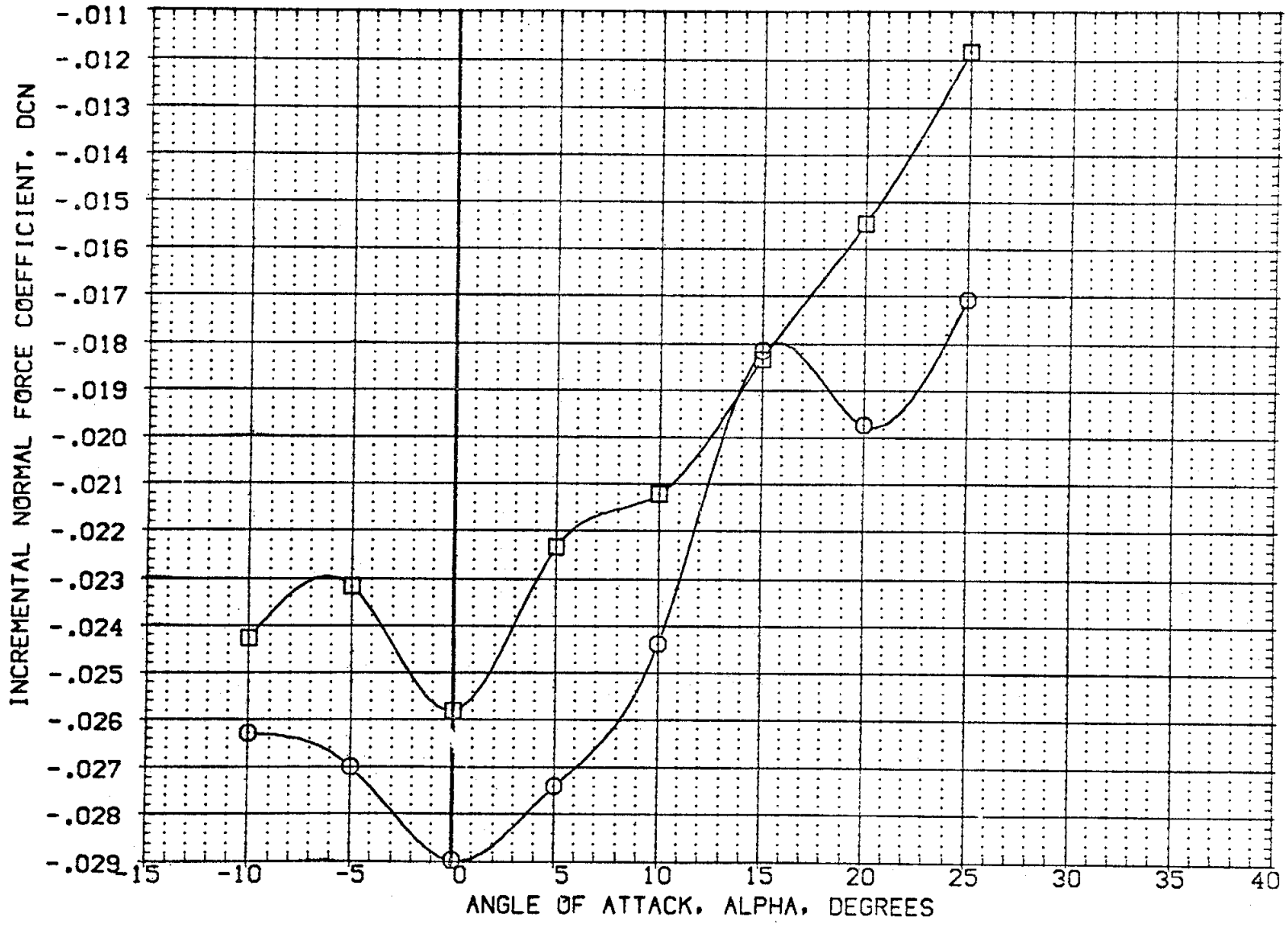


FIG 5 EFFECT ØF ELEVØN DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

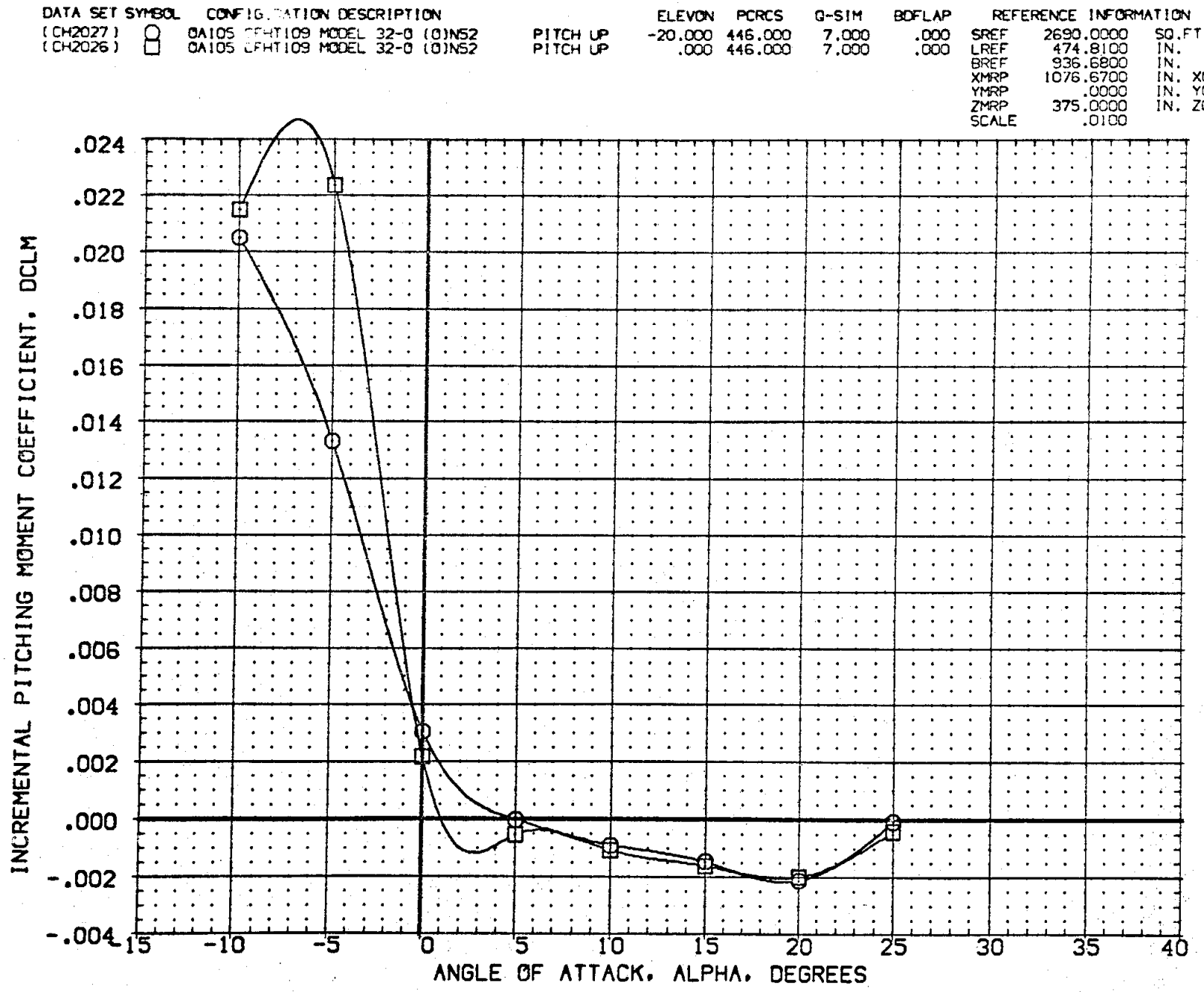


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026) □	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

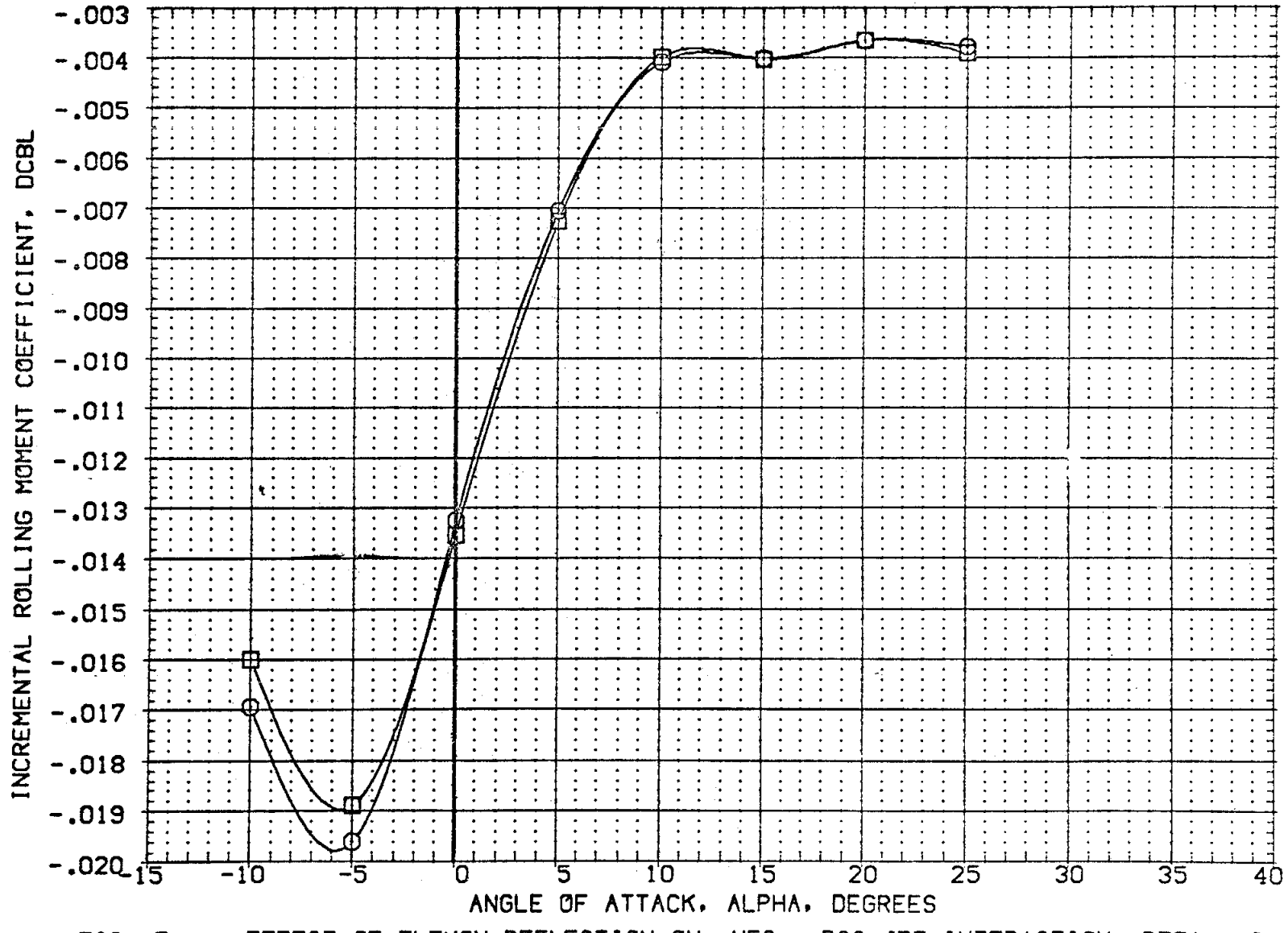


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2027)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

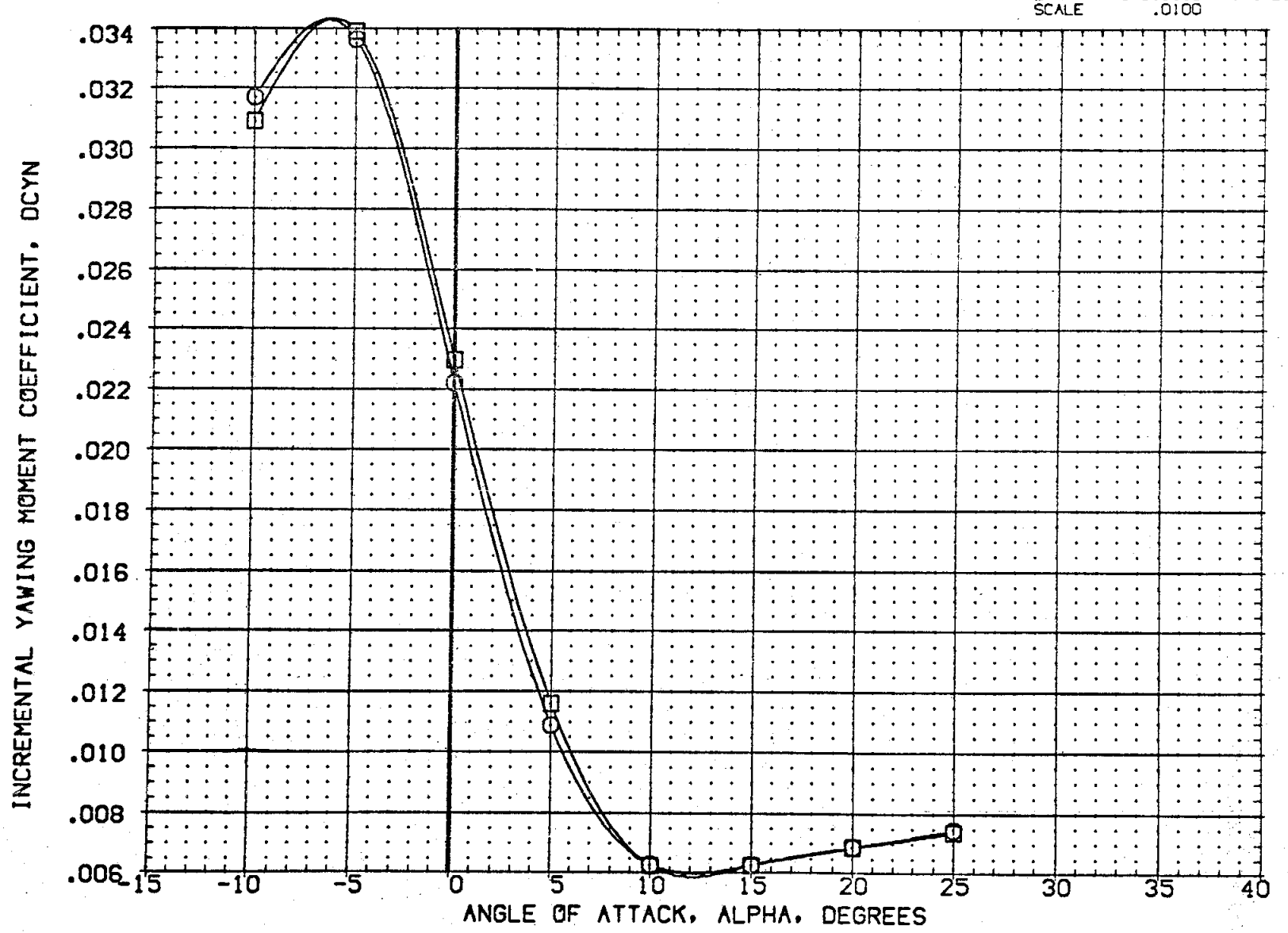


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH227N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

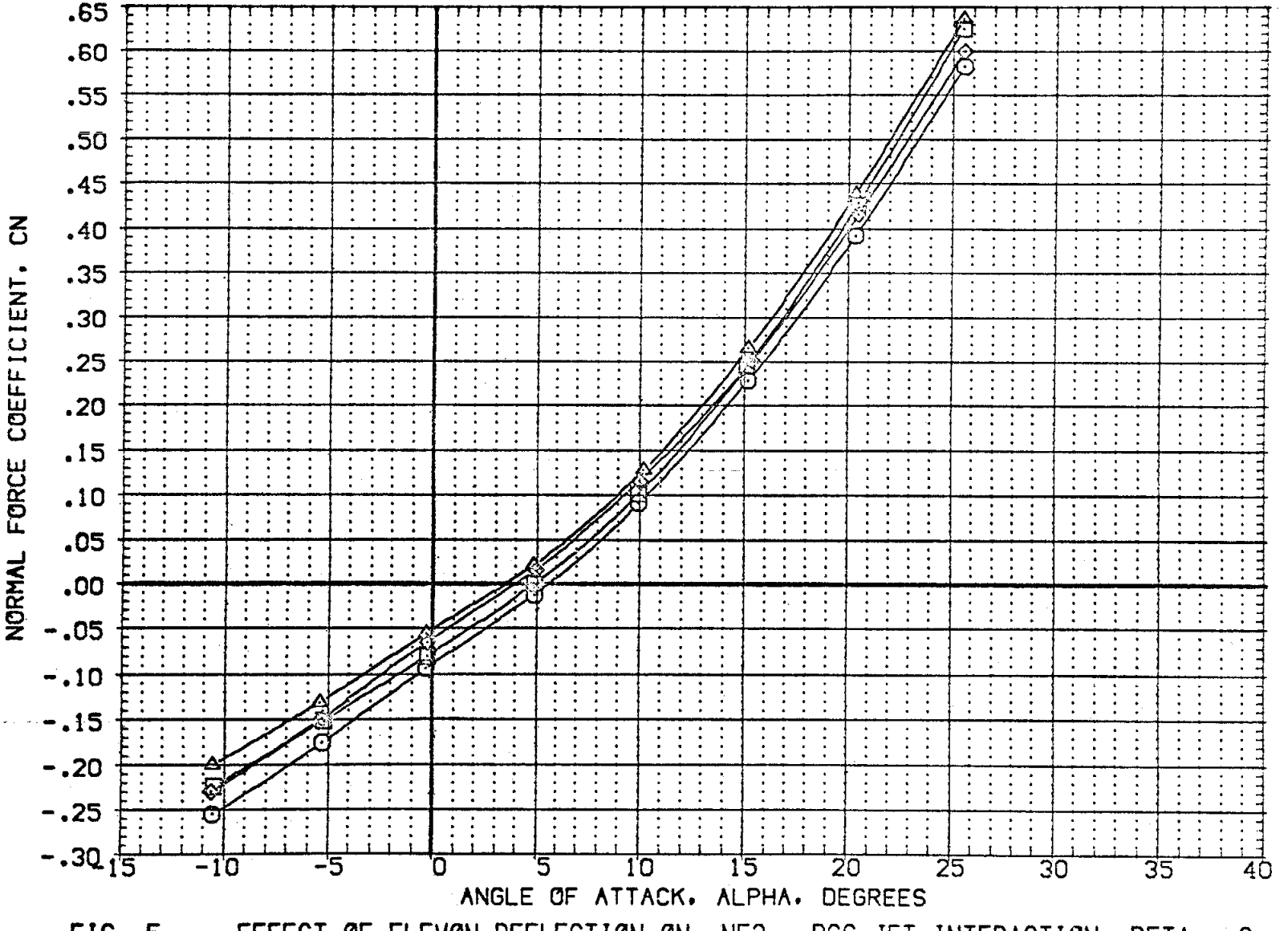


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH227N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

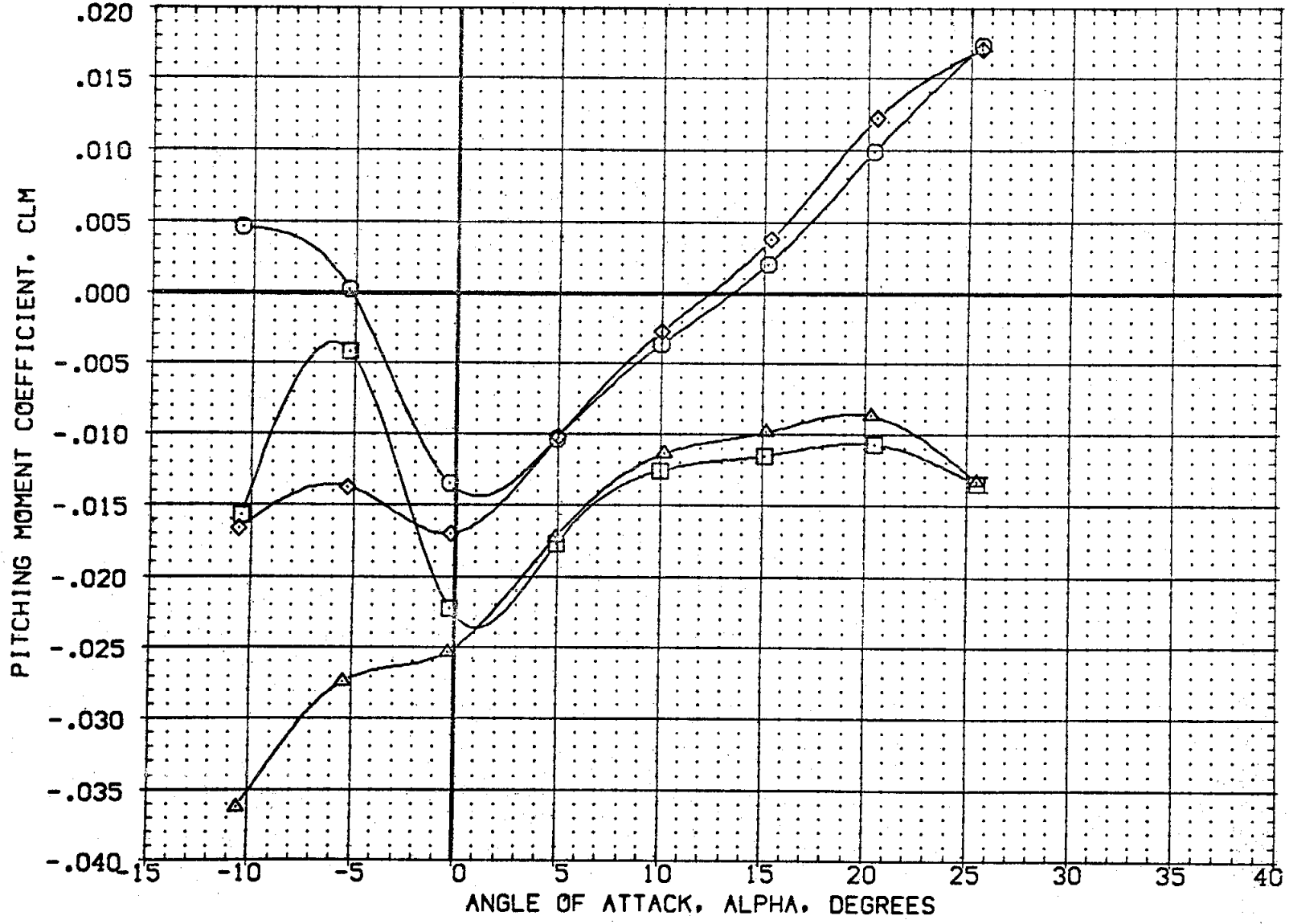


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH227N)	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(ZH226N)	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000
(ZH206F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

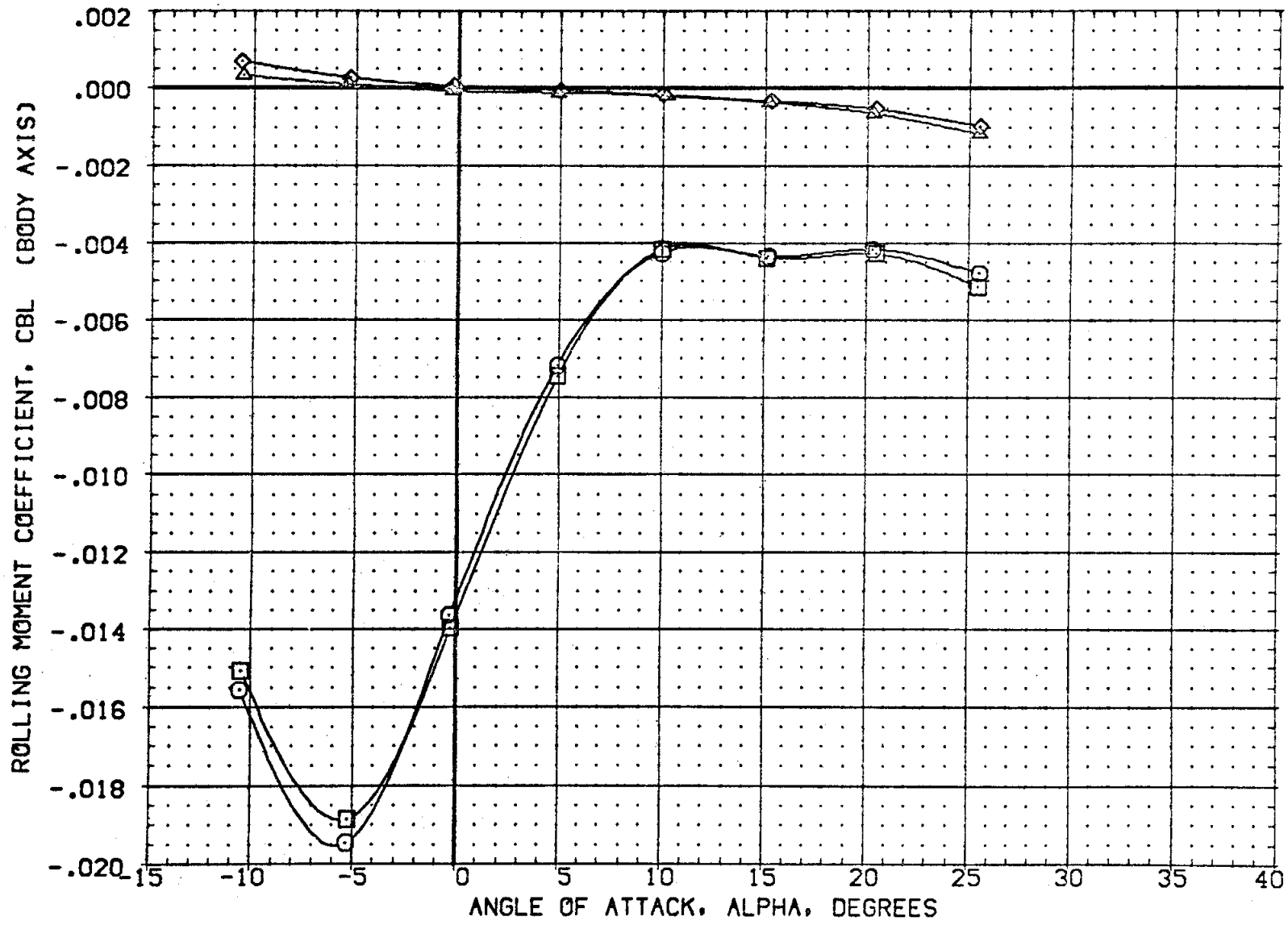


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH227N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-20.000	446.000	7.000	.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

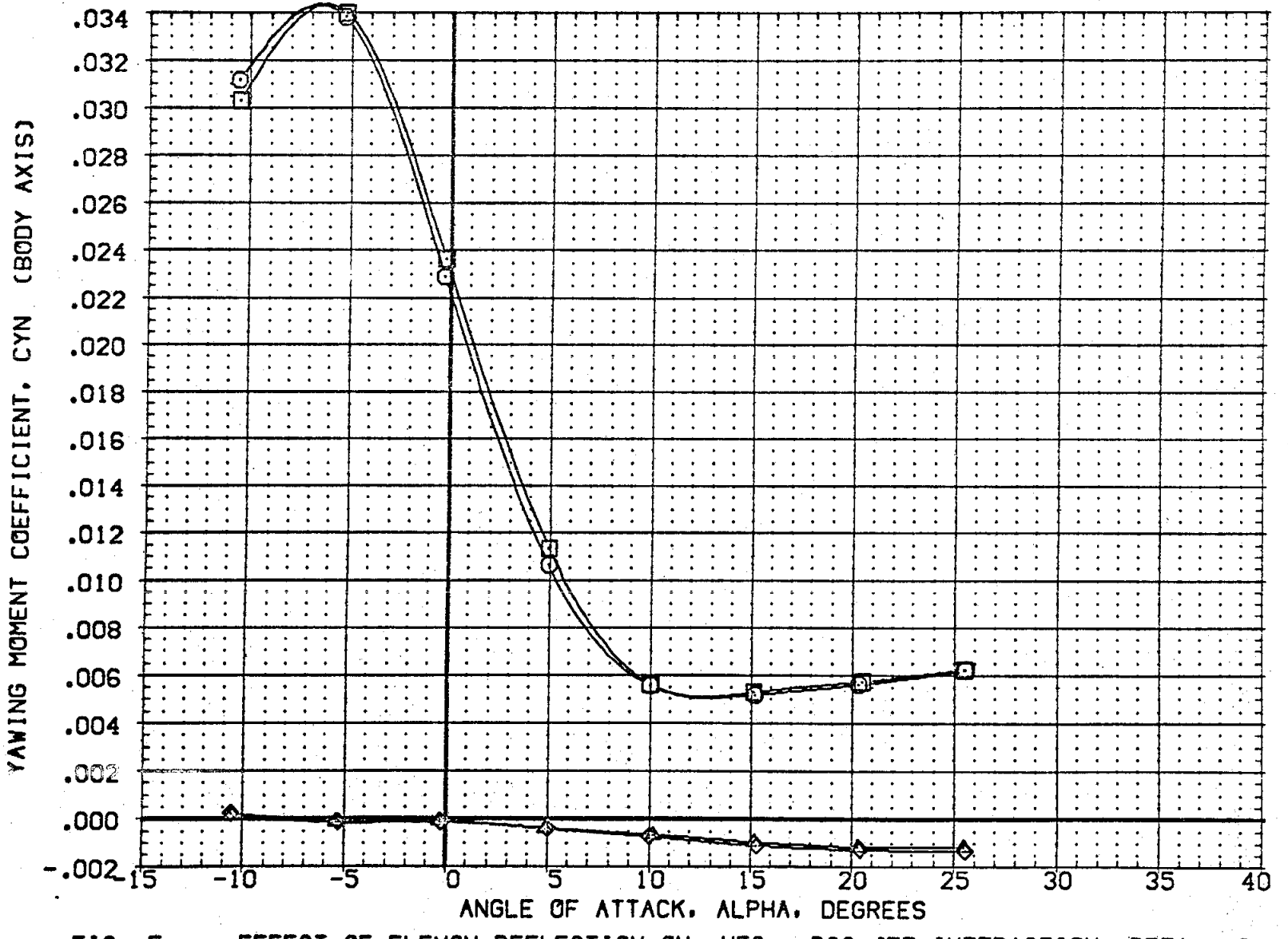


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1006)	○	0A-85 CFHT101 MODEL 32-0 0IN52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 0IN52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

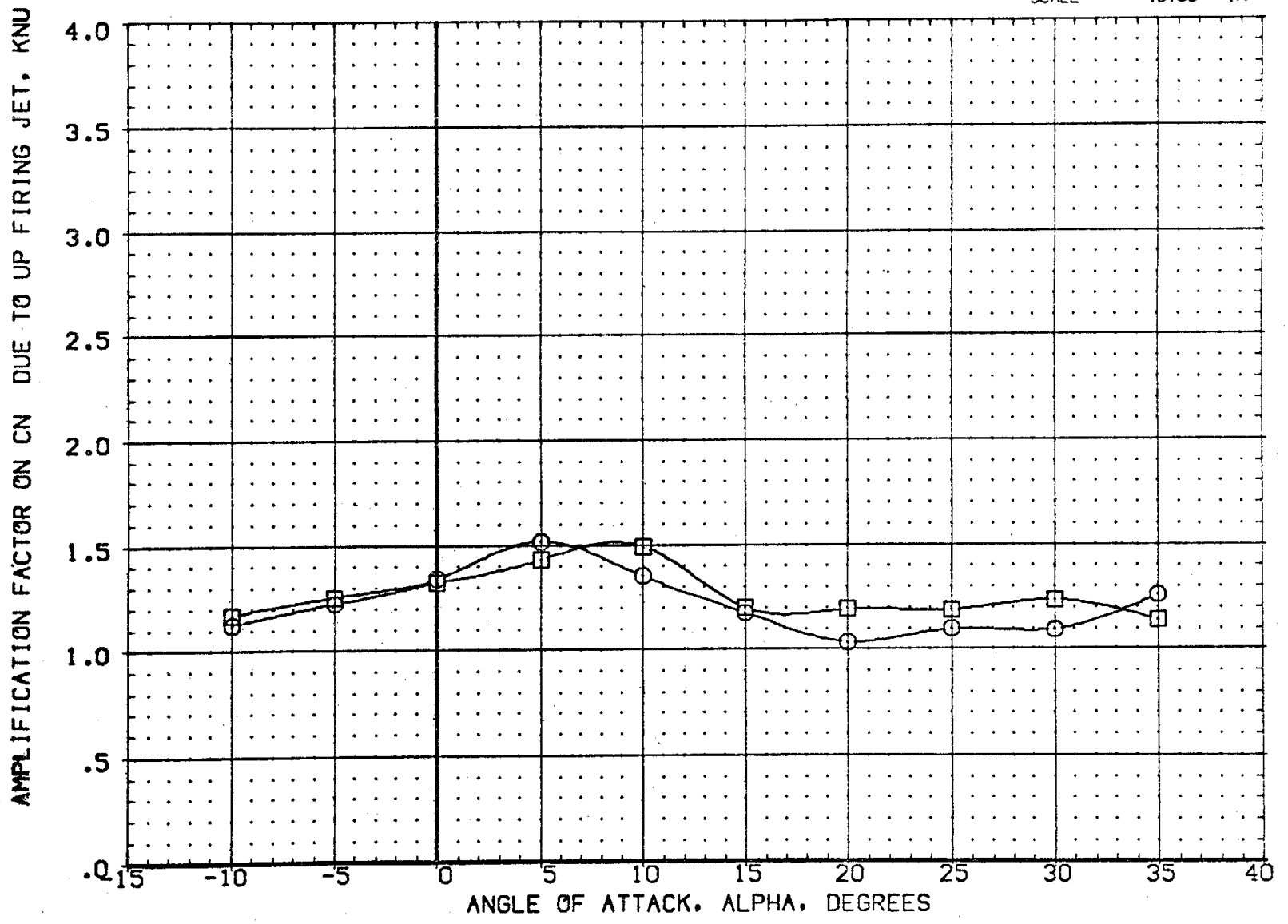


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(C01006)	○	0A-85 CFHTIO: MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(C01007)	□	0A-85 CFHTIO: MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

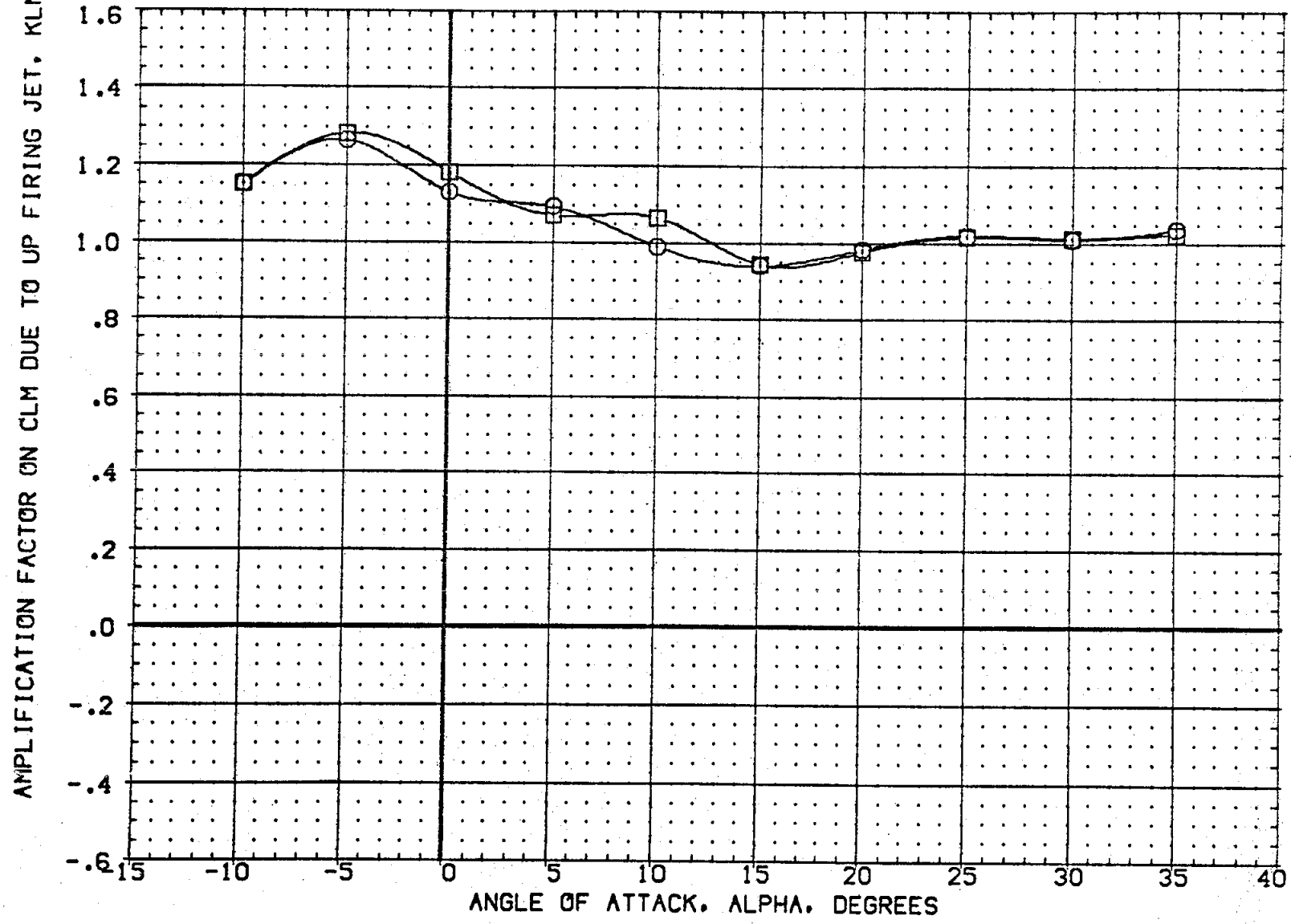


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQI006)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(CQI007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

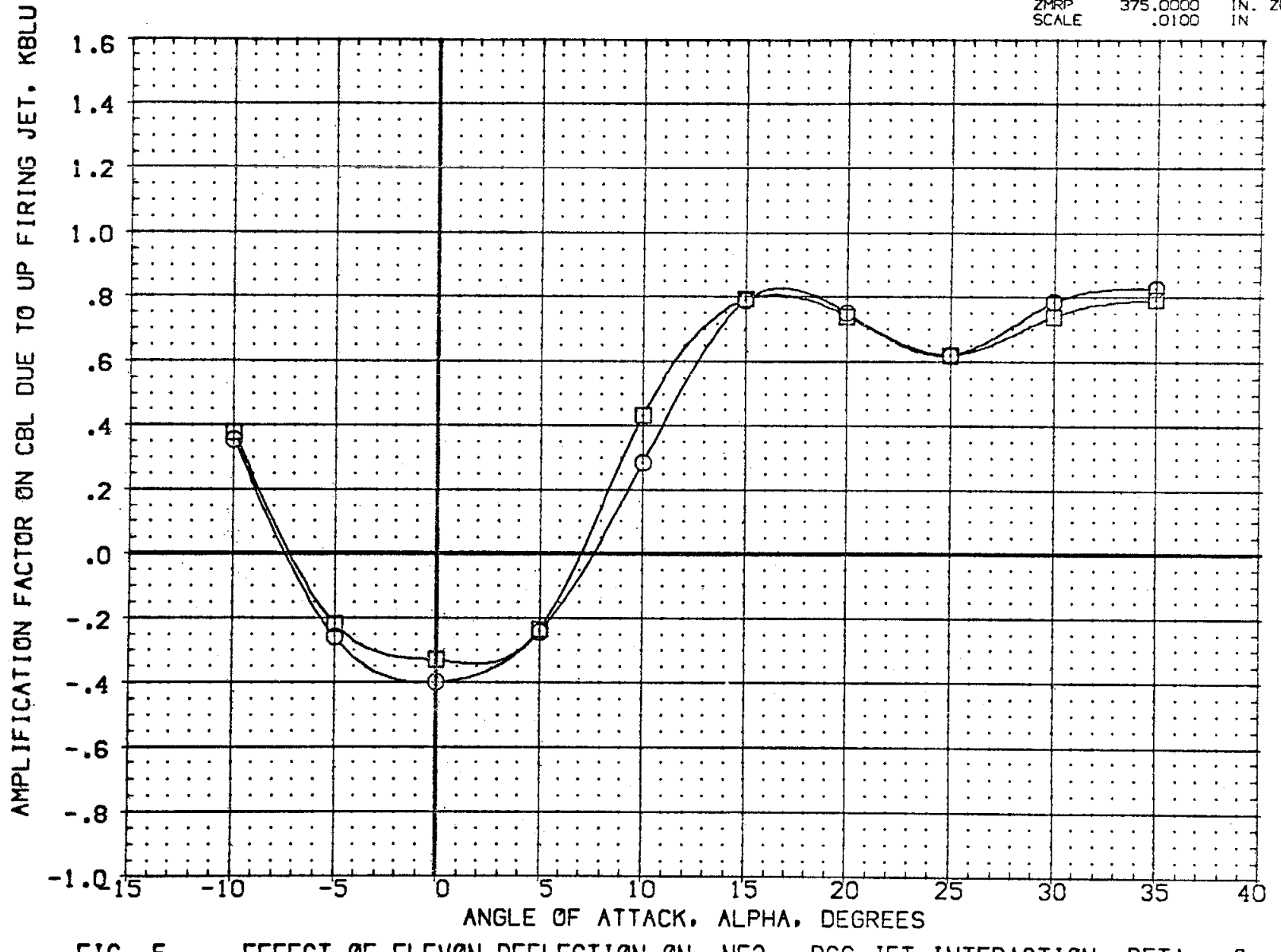


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1006) ○	0A-85 CFHT10' MODEL 32-0 0IN52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007) □	0A-85 CFHT101 MODEL 32-0 0IN52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	IN

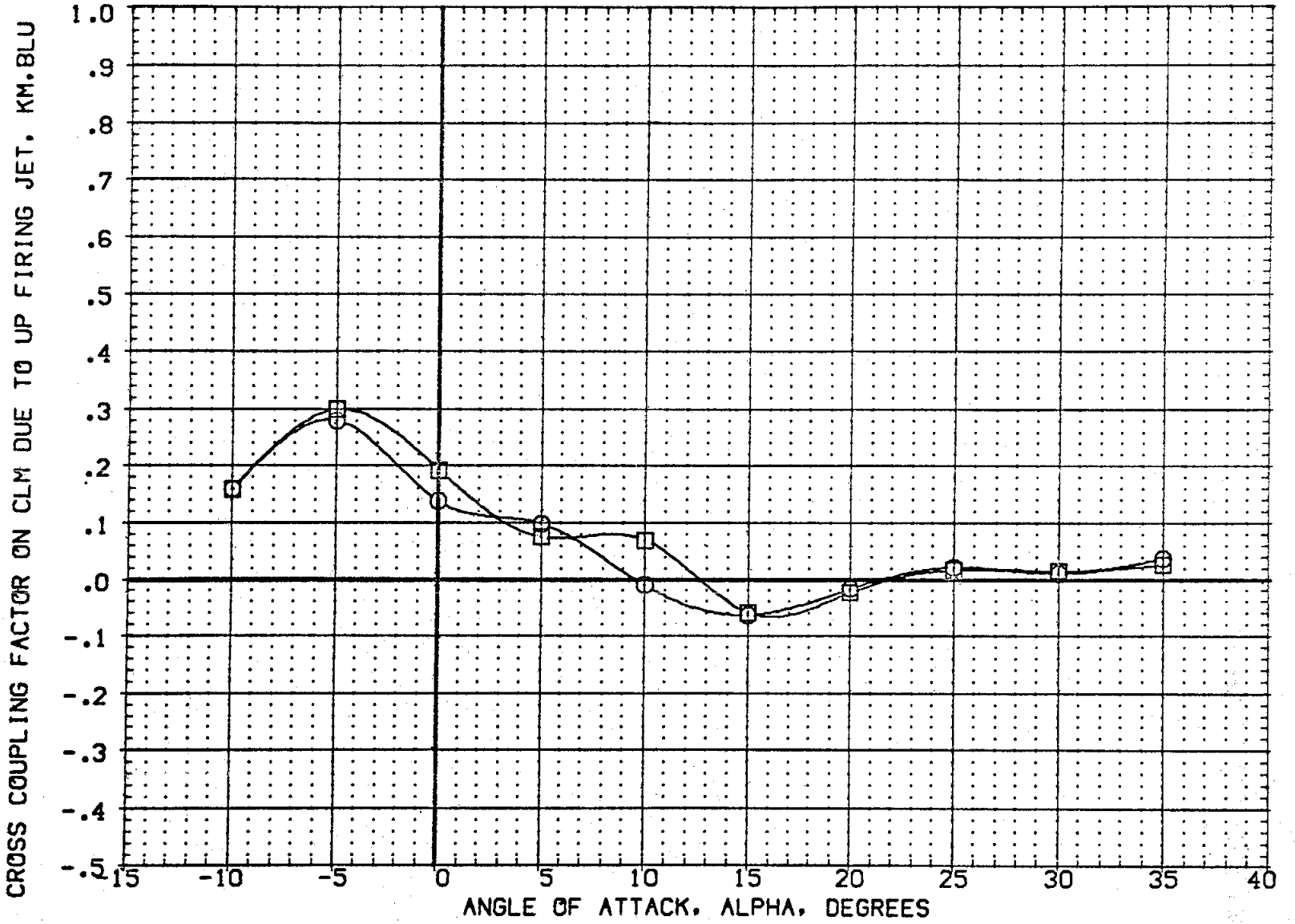


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1006)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

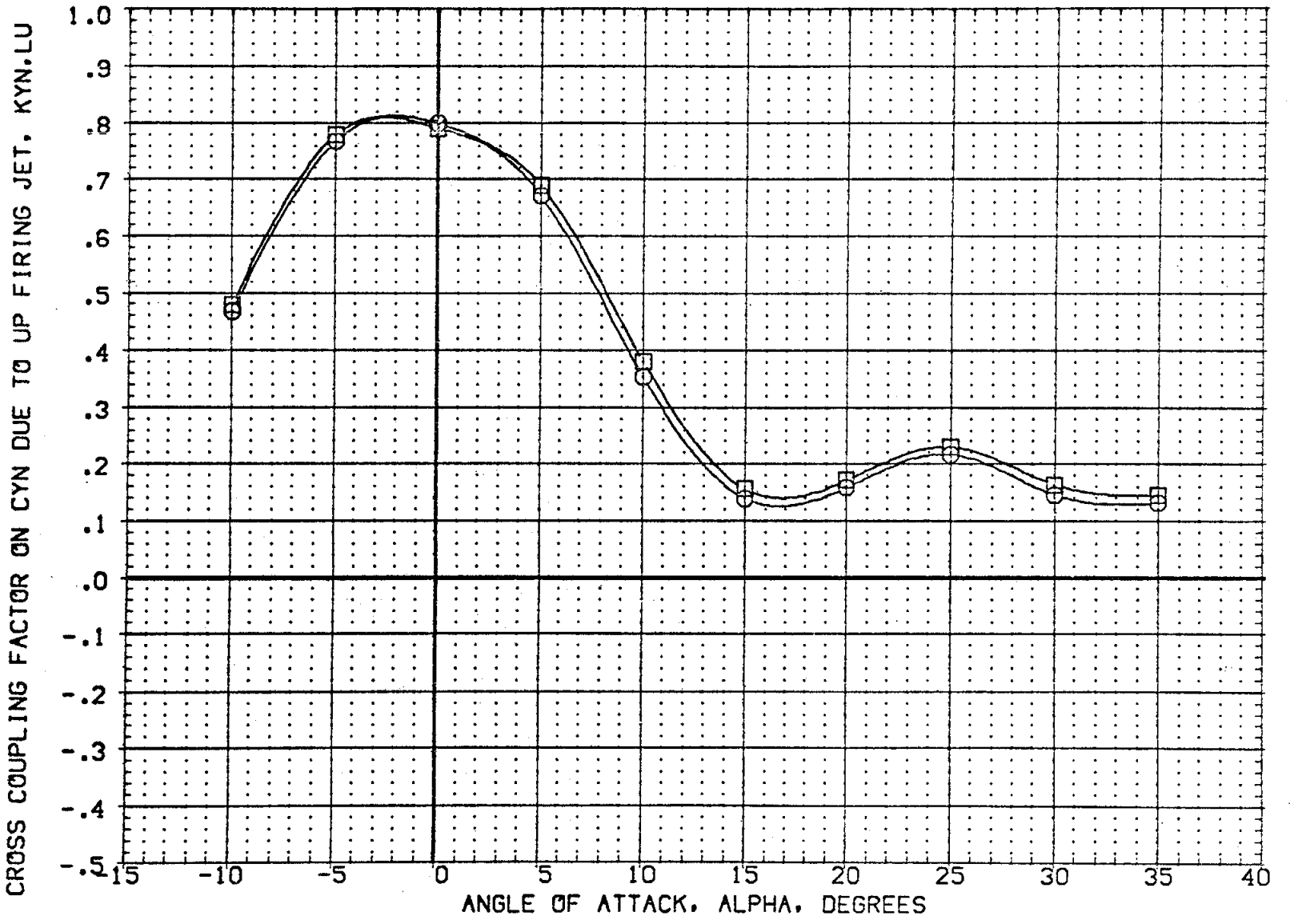


FIG 5 EFFECT ØF ELEVØN DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(C01006)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(C01007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	IN

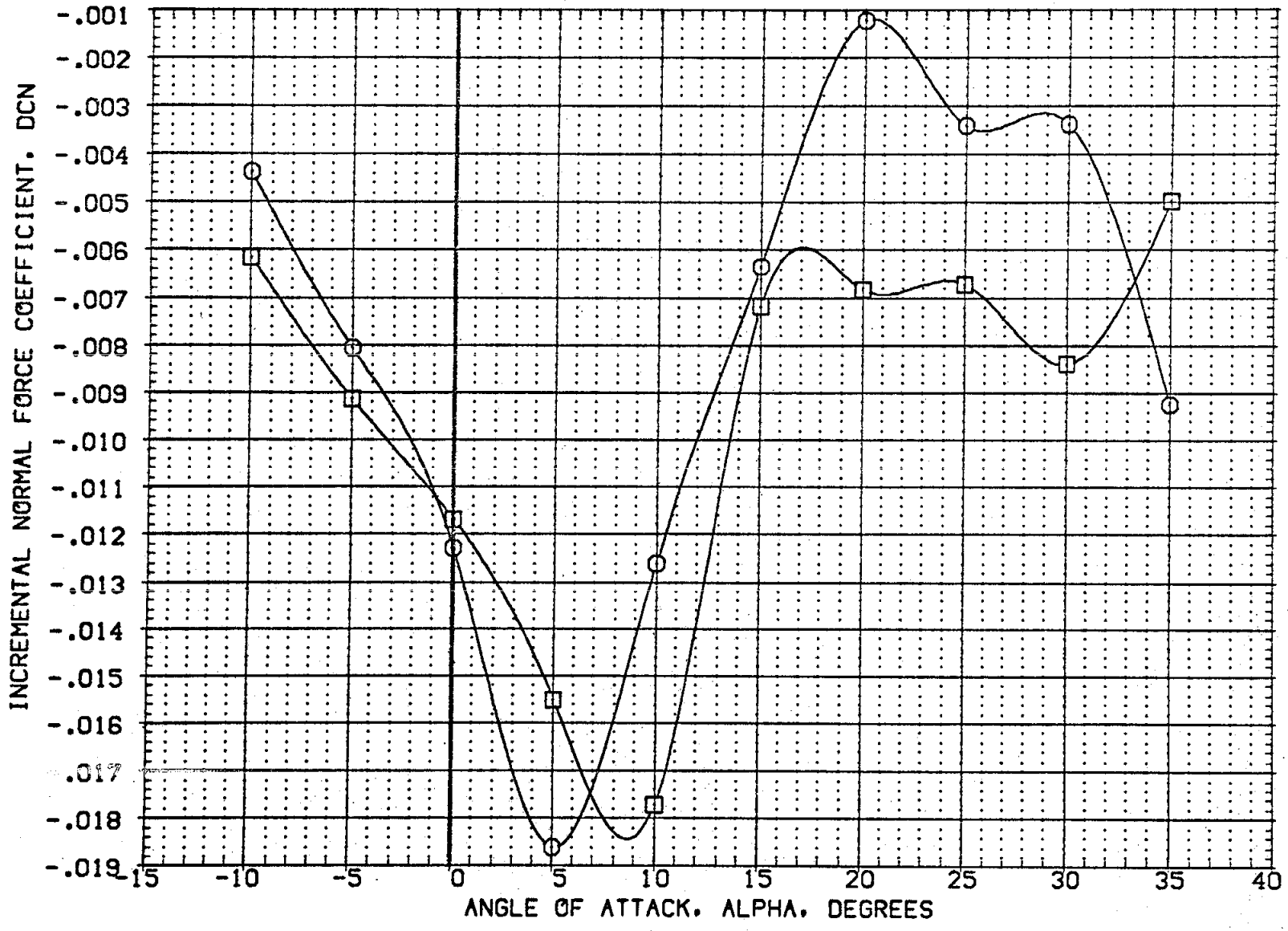


FIG 5 EFFECT ØF ELEVØN DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1006)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

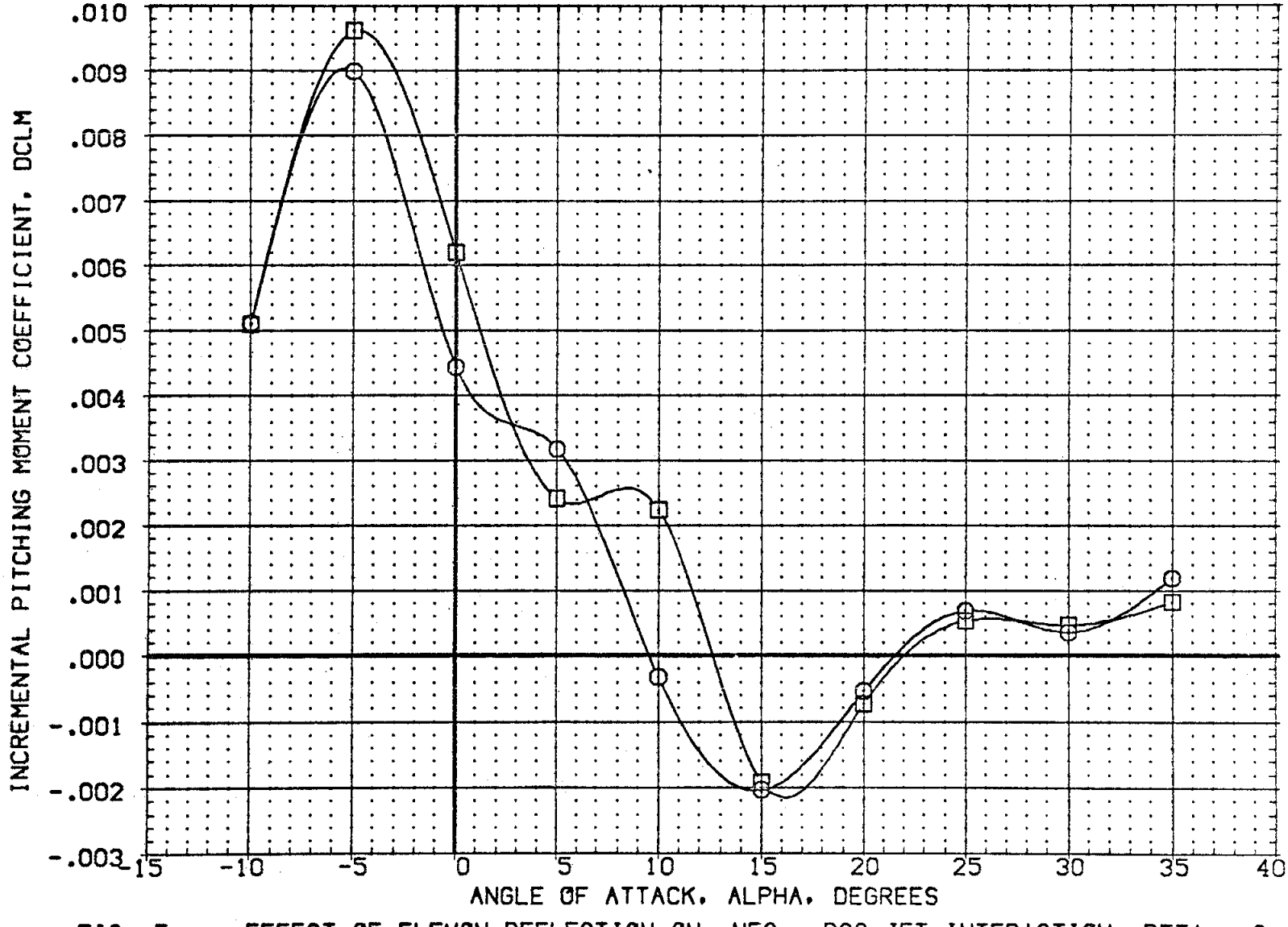


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1006) ○	0A-85 ORBITOR MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007) □	0A-85 ORBITOR MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

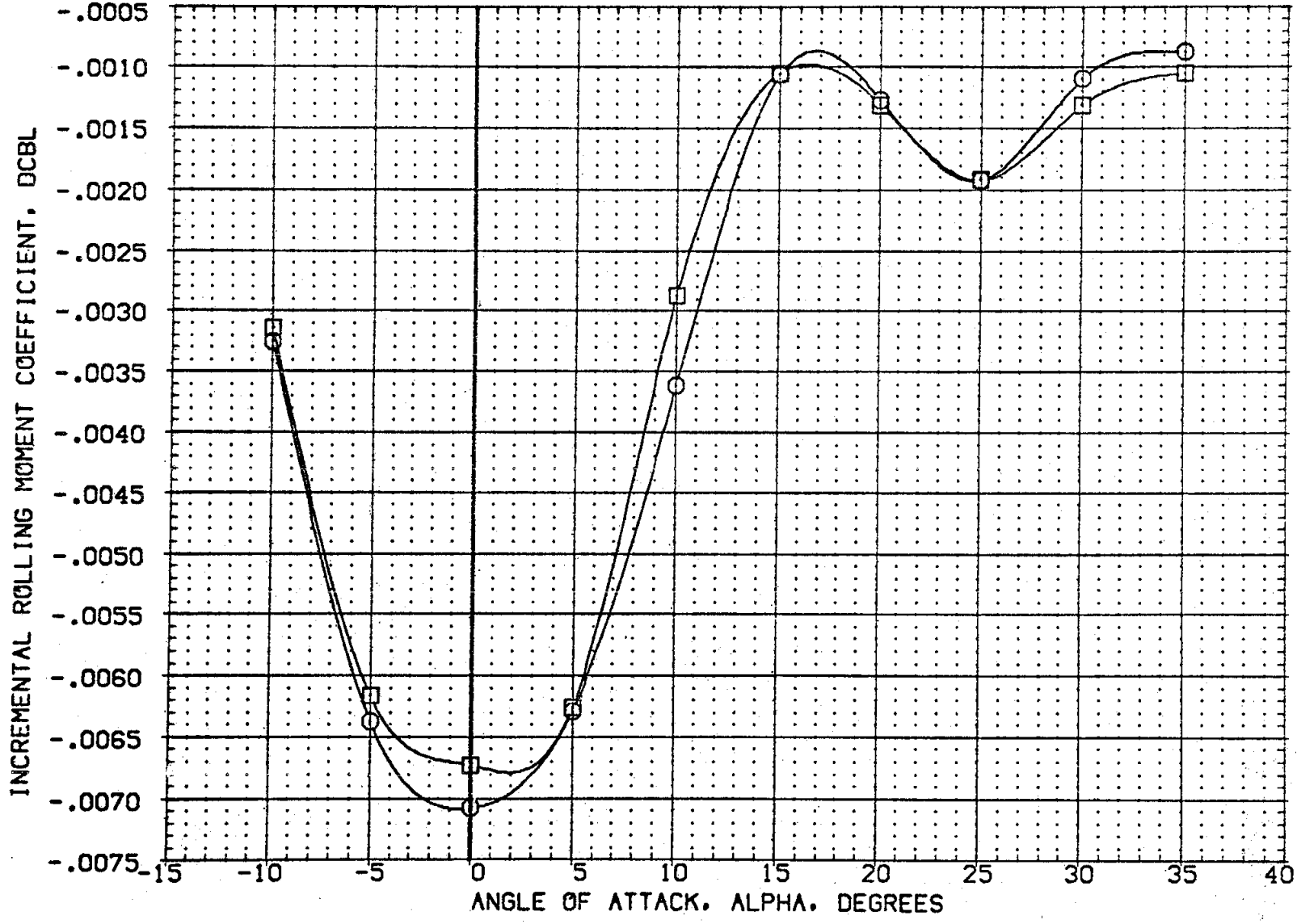


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1006) ○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(CQ1007) □	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

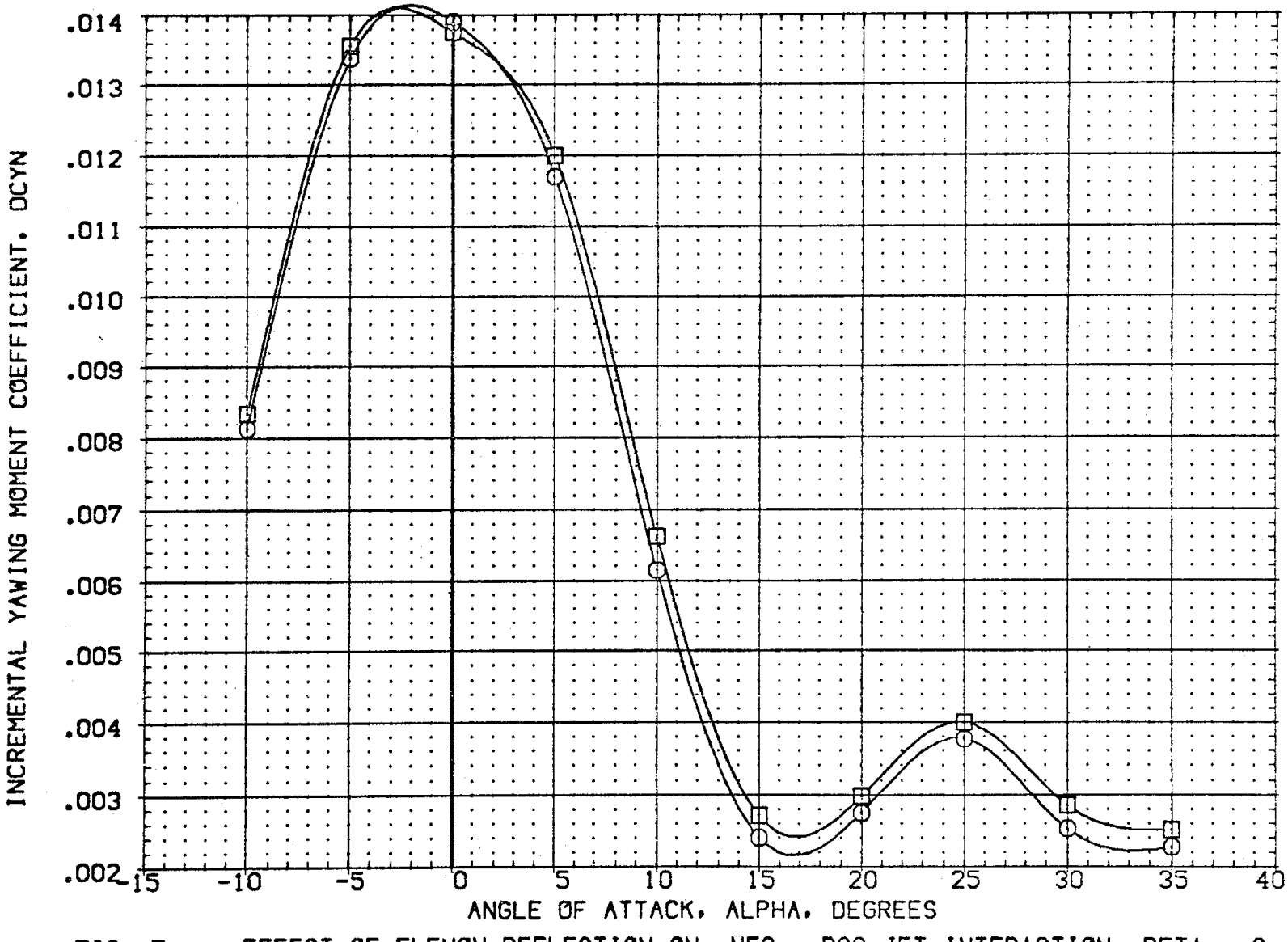


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			ELEVON	PCRCS	Q-SIM	BDFLAP
(ZQ106N)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP		-20.000	158.000	20.000	.000
(ZQ107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP		.000	158.000	20.000	.000
(ZQ102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51		RCS OFF	-20.000	.000	.000	.000
(ZQ103F)	△	0A-85 CFHT101 MODEL 32-0 01 N52		RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	IN

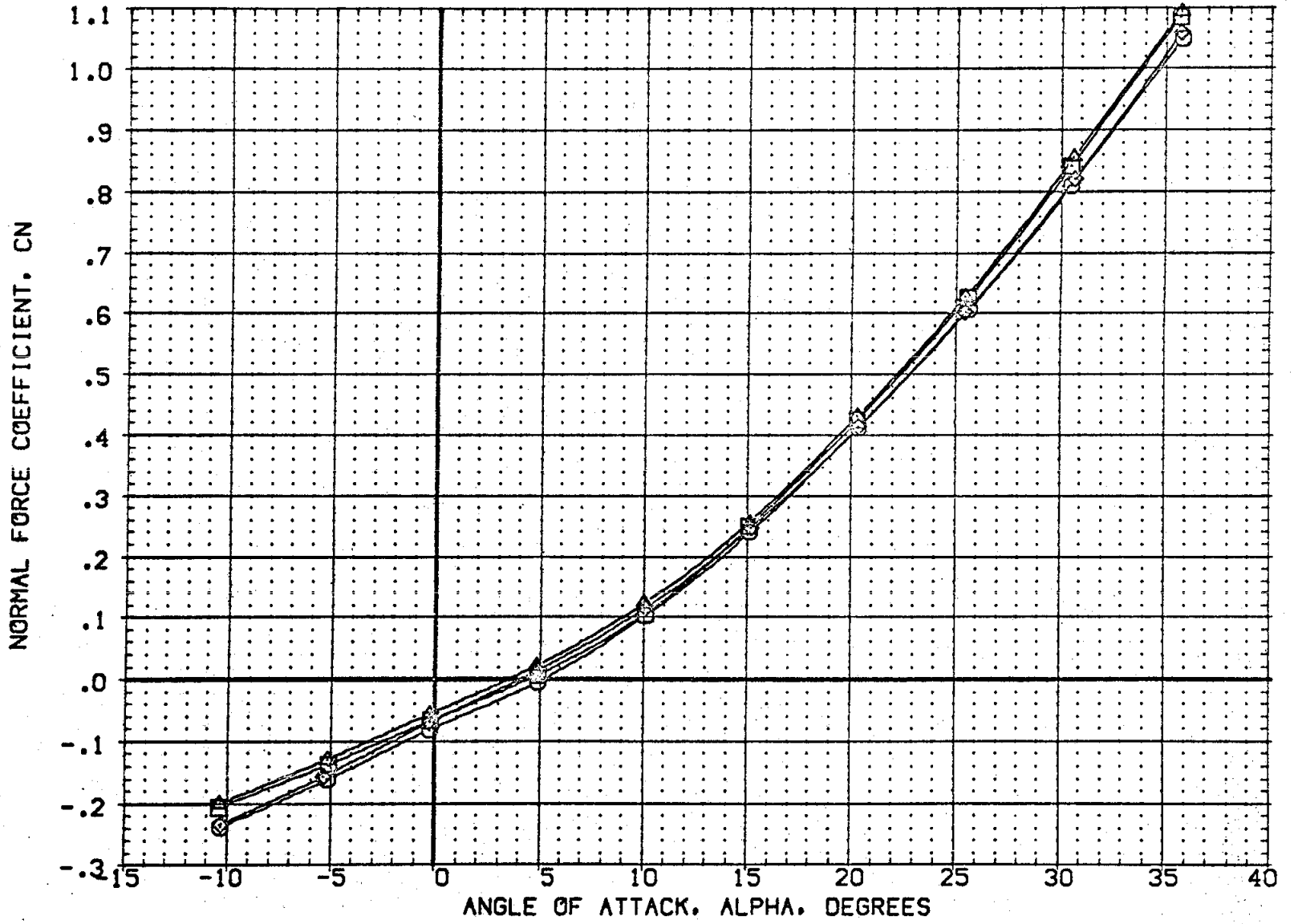


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(Z0106N)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(Z0107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000
(Z0102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000
(Z0103F)	△	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZQ106N)	○	OA-85 CFHTIC, MODEL 32-0 OIN52	PITCH UP	-20.000	158.000	20.000	.000
(ZQ107N)	□	OA-85 CFHTIOI MODEL 32-0 OIN52	PITCH UP	.000	158.000	20.000	.000
(ZQ102F)	◇	OA-85 CFHTIOI MODEL 32-0 OI N51	RCS OFF	-20.000	.000	.000	.000
(ZQ103F)	△	OA-85 CFHTIOI MODEL 32-0 OI N52	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

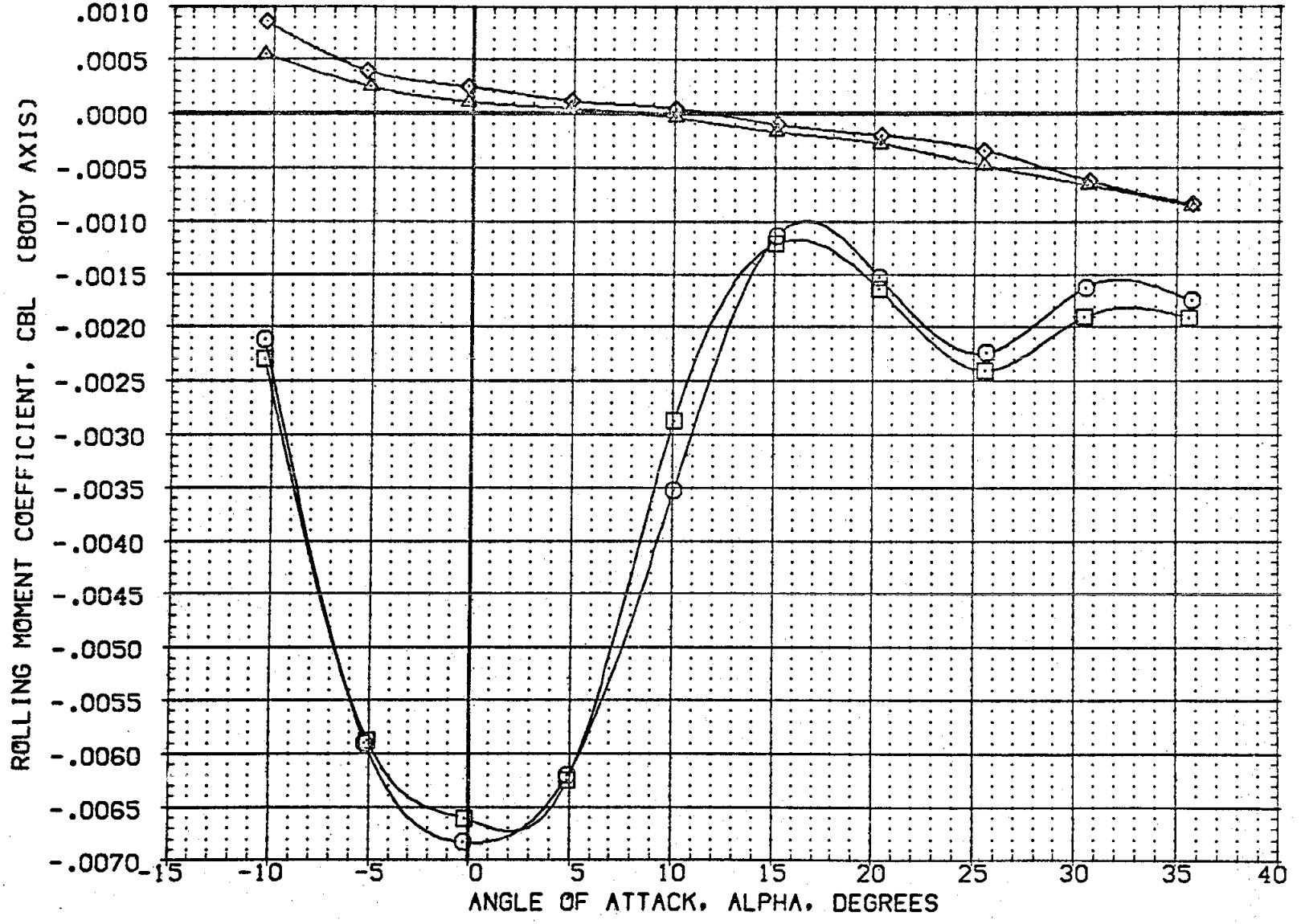


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZQ106N)	○	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	-20.000	158.000	20.000	.000
(ZQ107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	20.000	.000
(ZQ102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000
(ZQ103F)	△	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

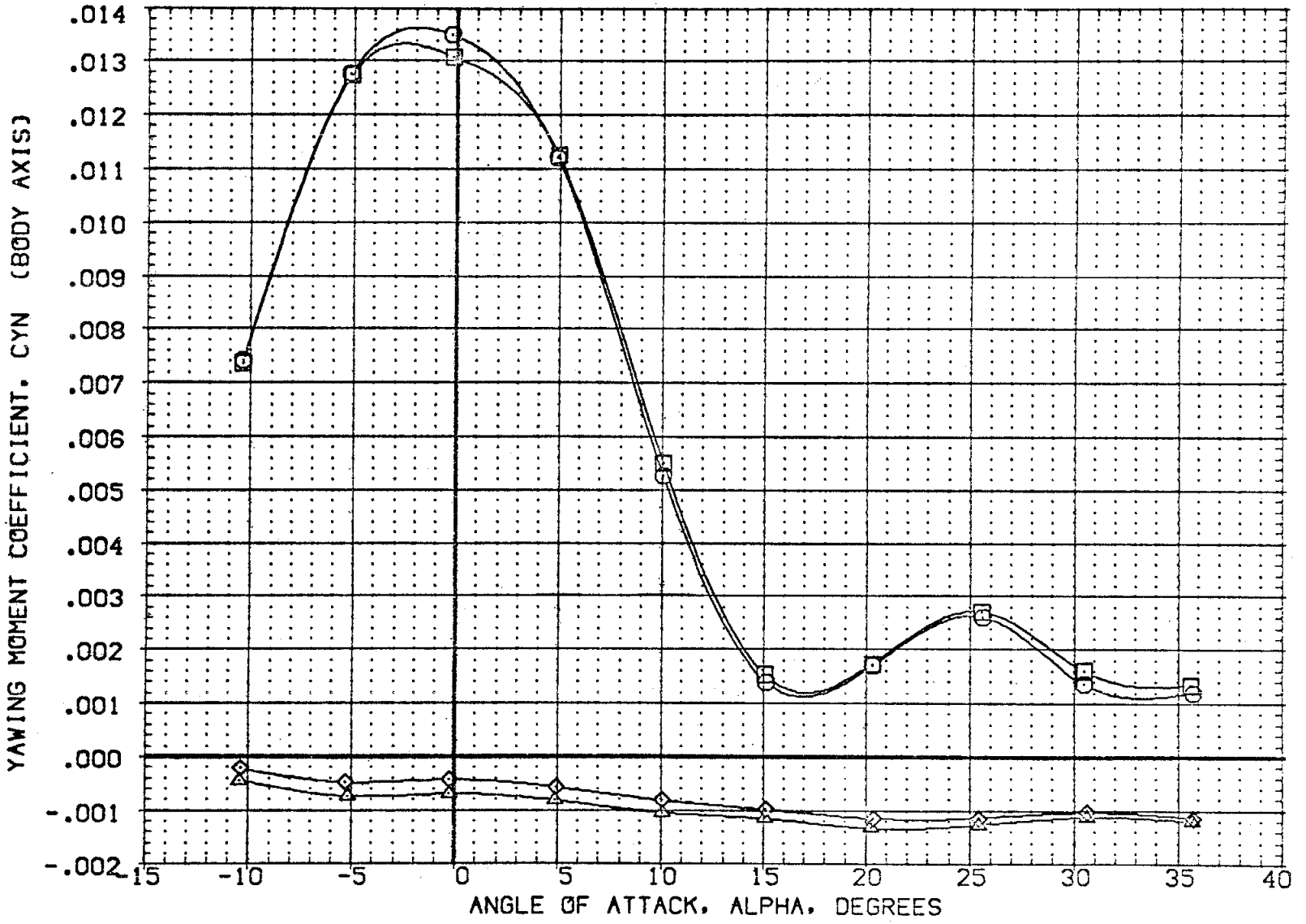


FIG 5 EFFECT OF ELEVON DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	OA105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	OA105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	OA105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

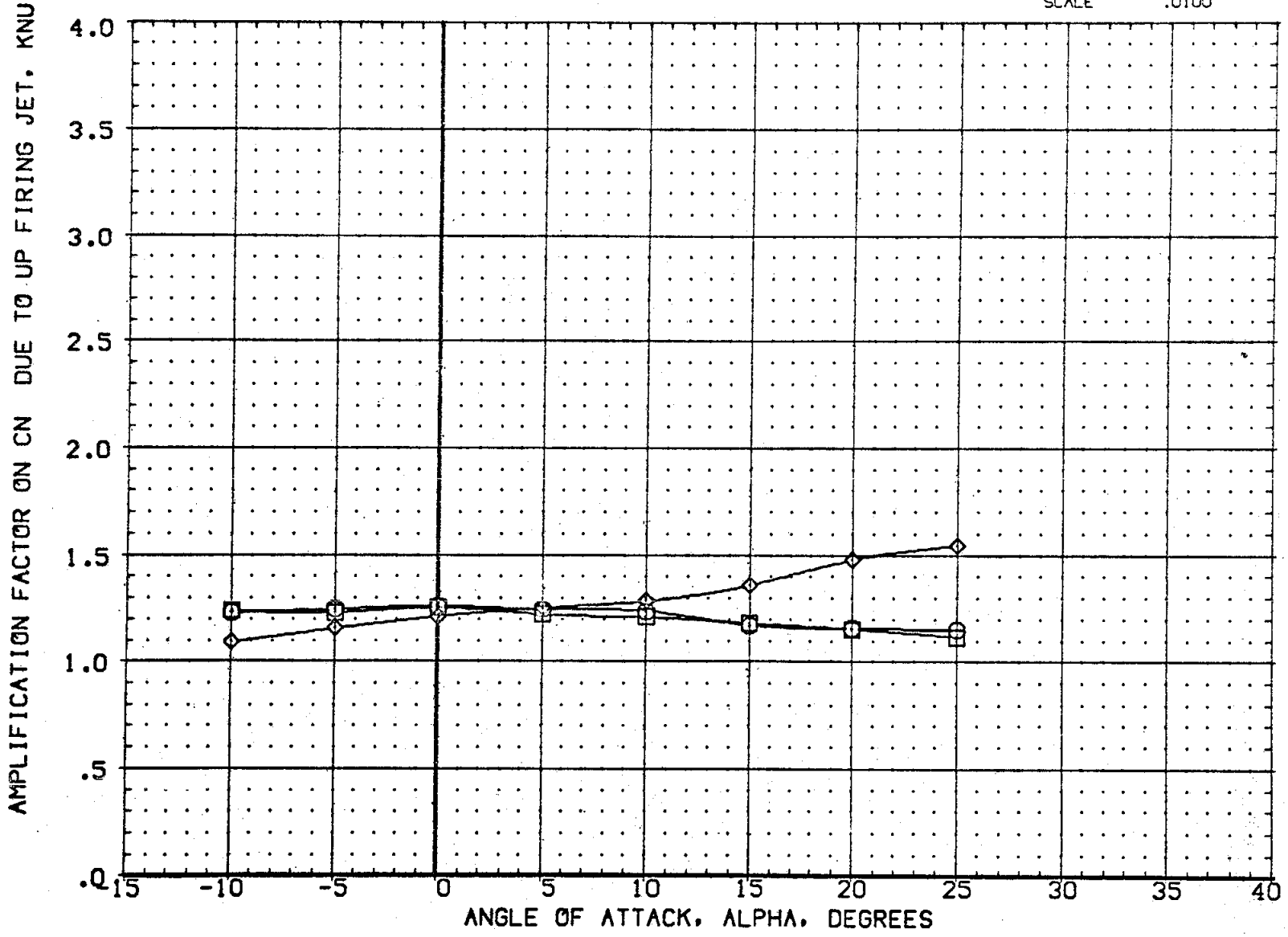


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

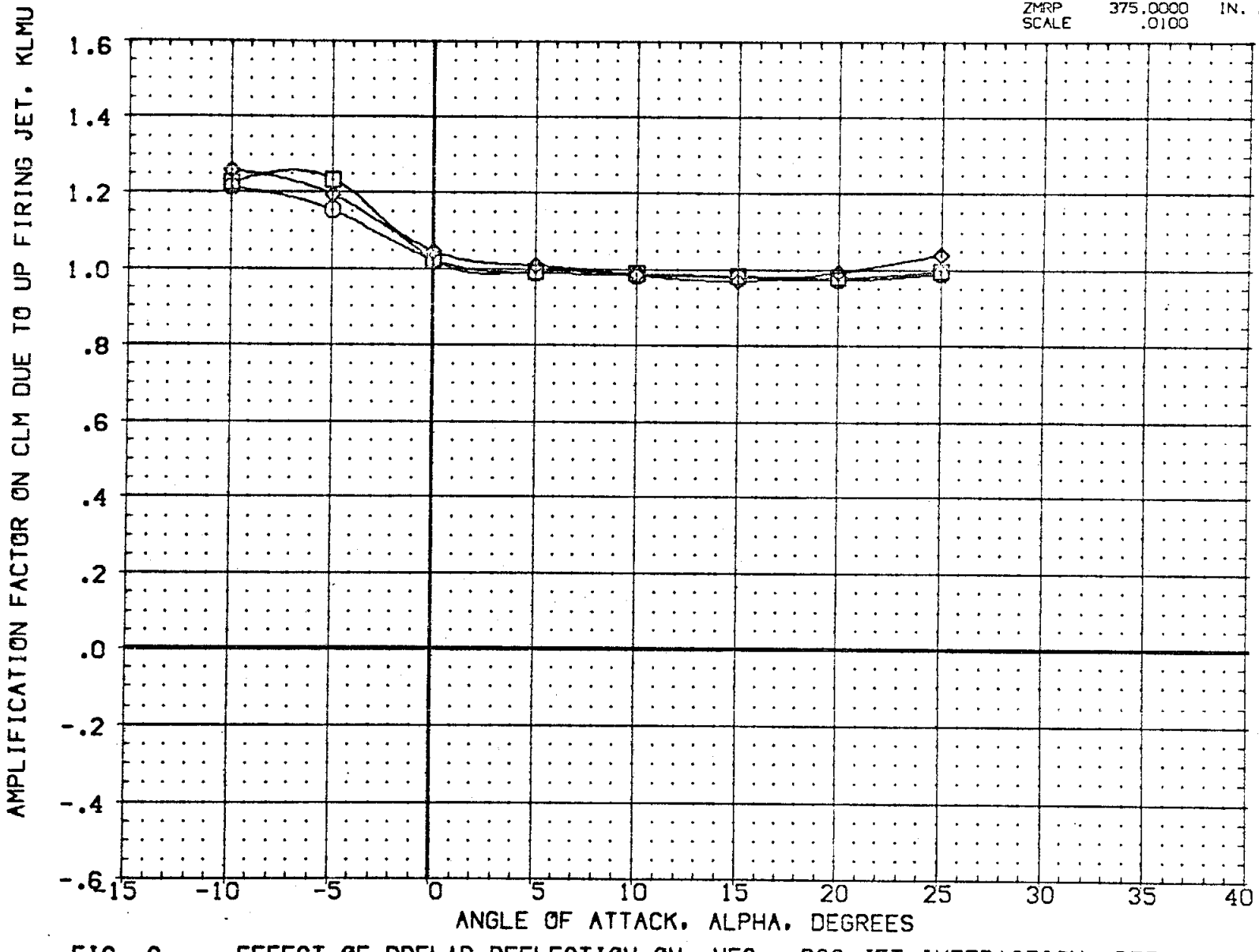


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

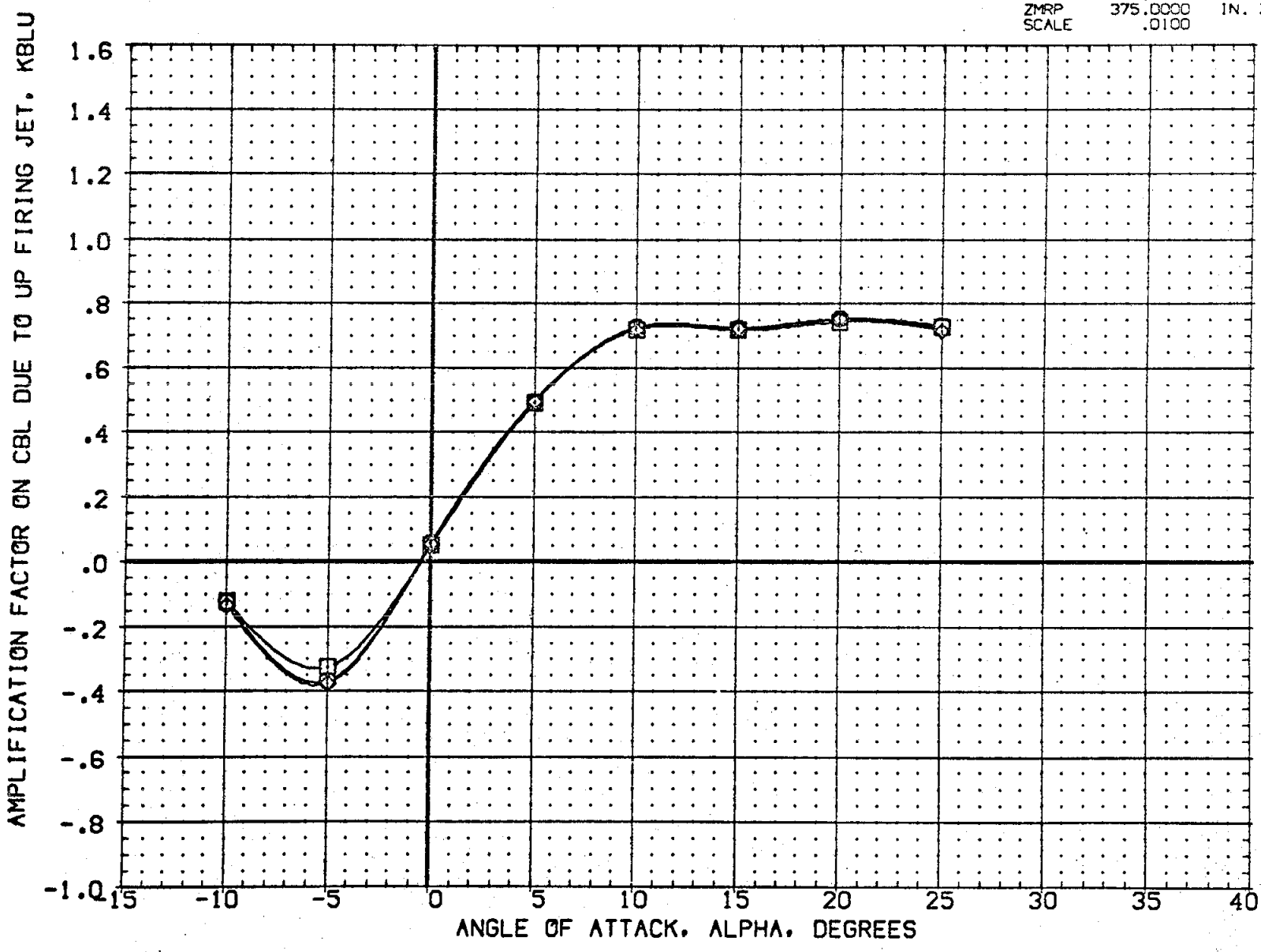


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026) □	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012) ◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

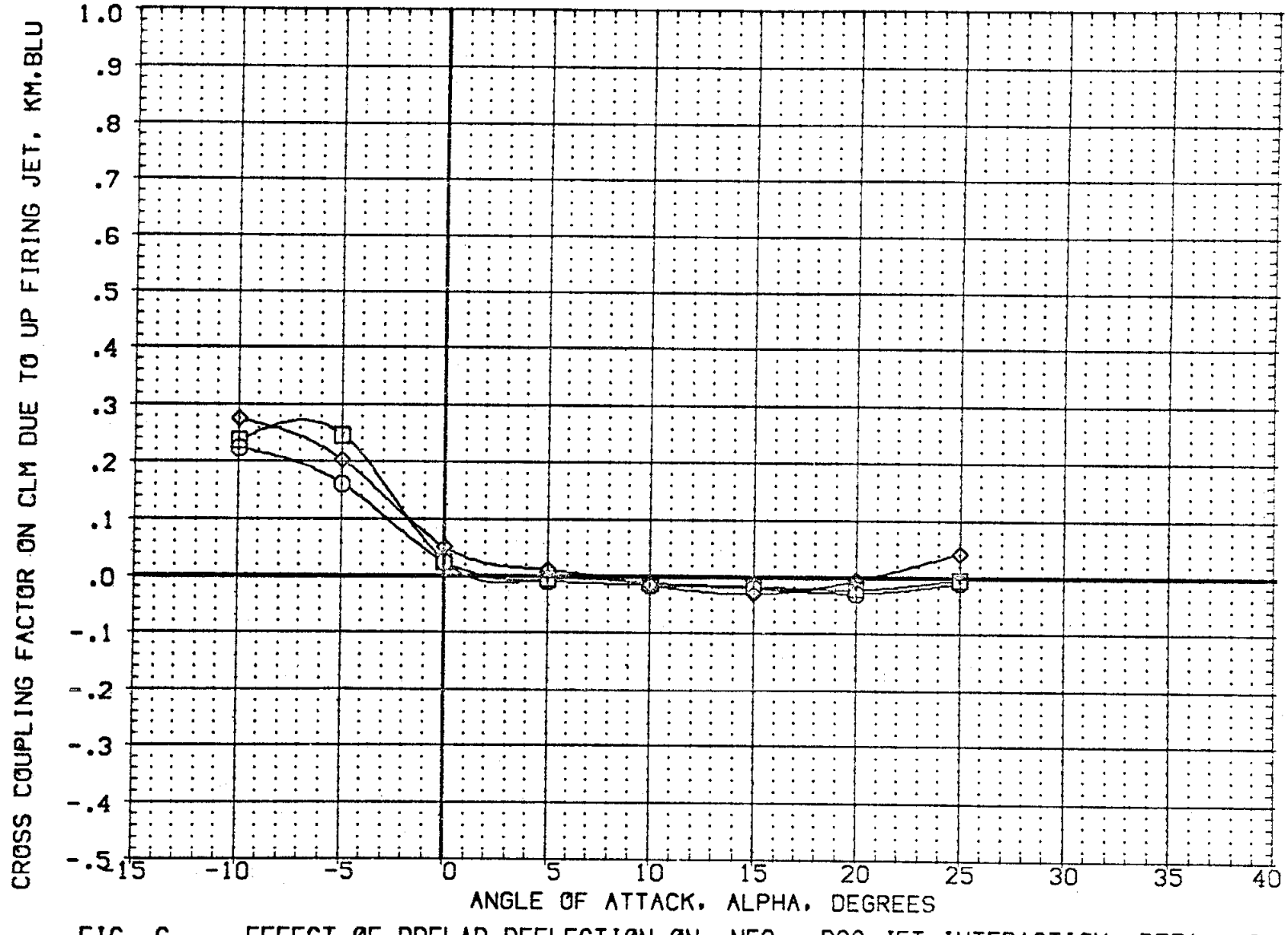


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

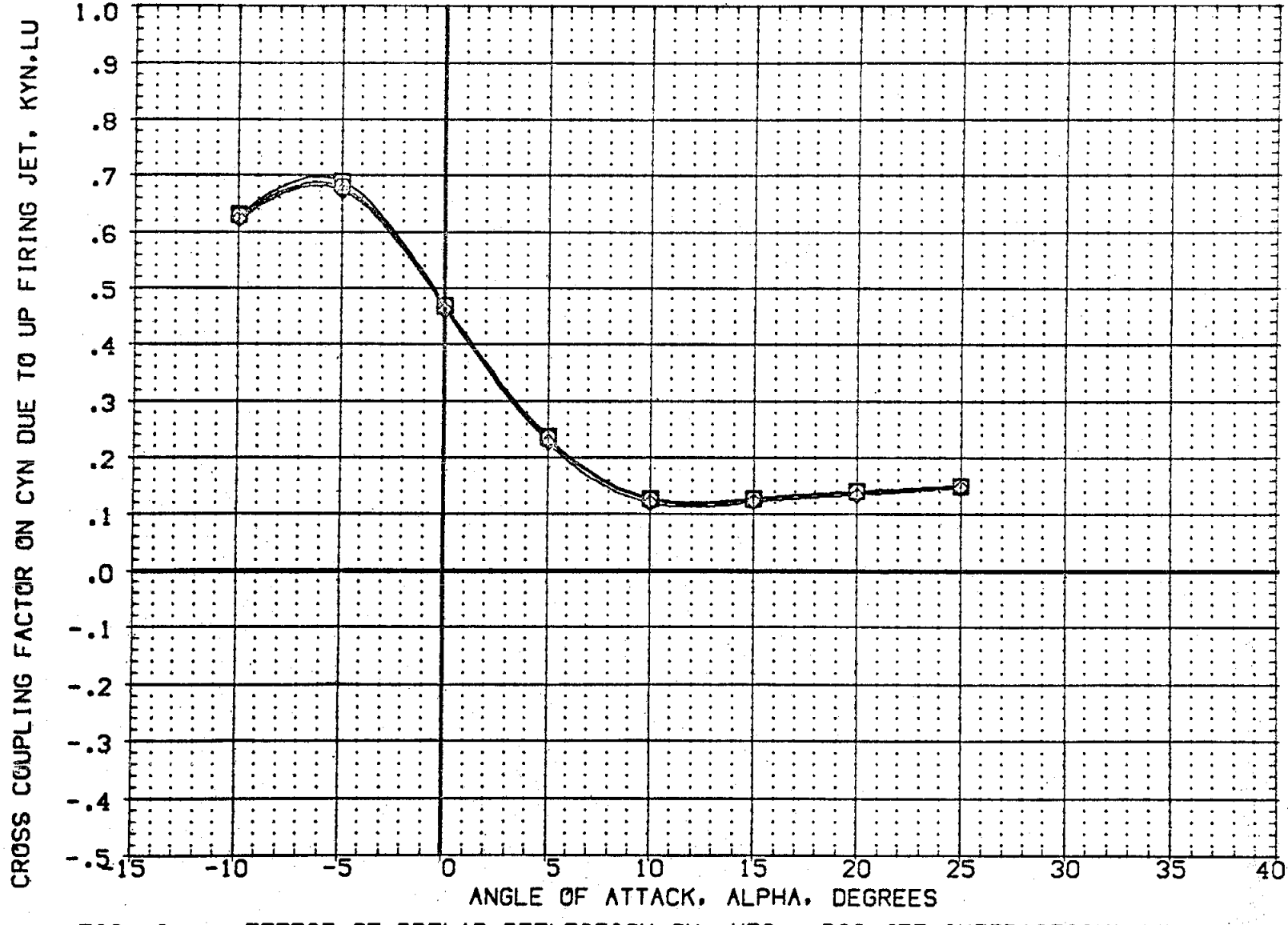


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6300	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

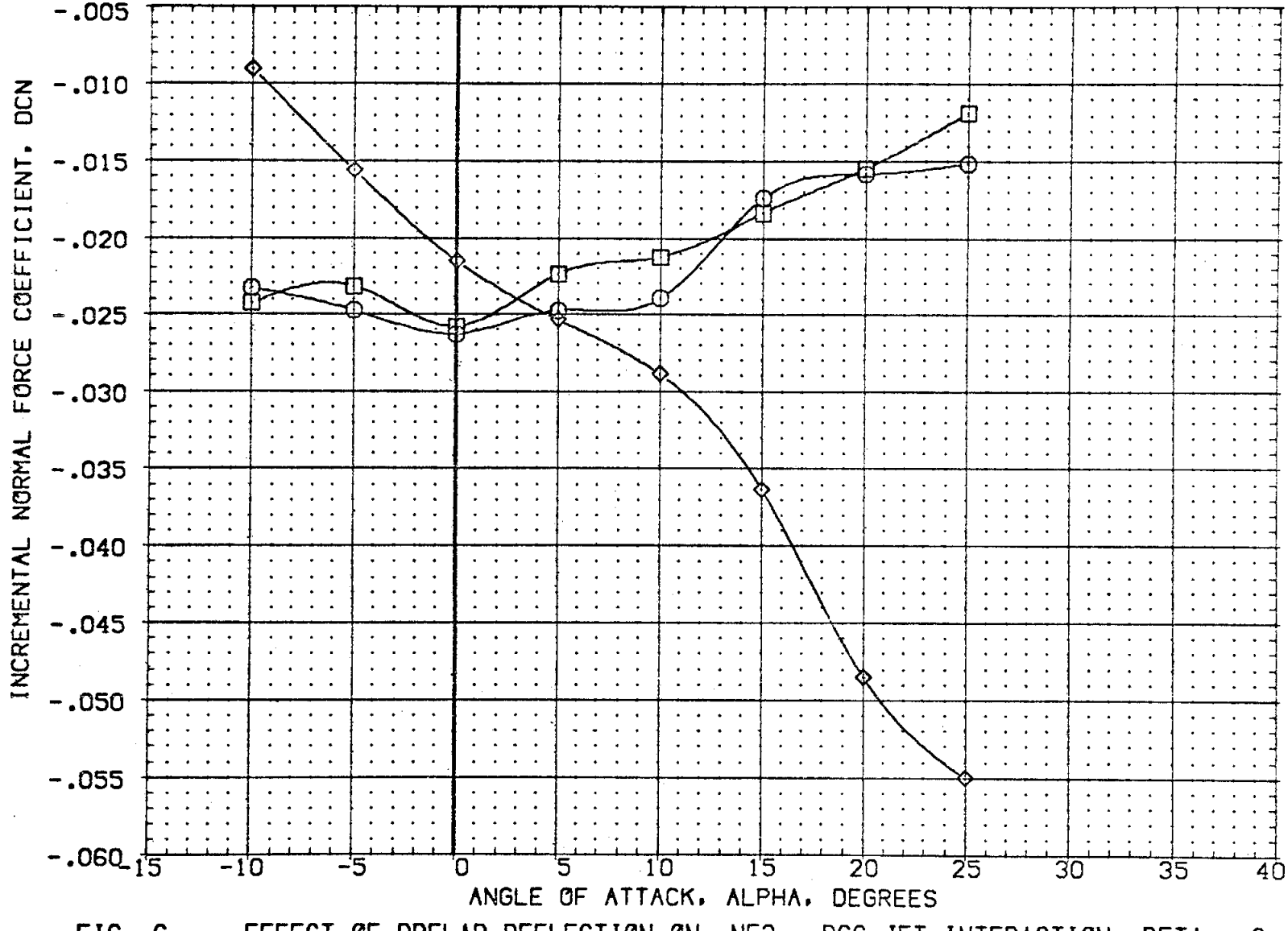


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

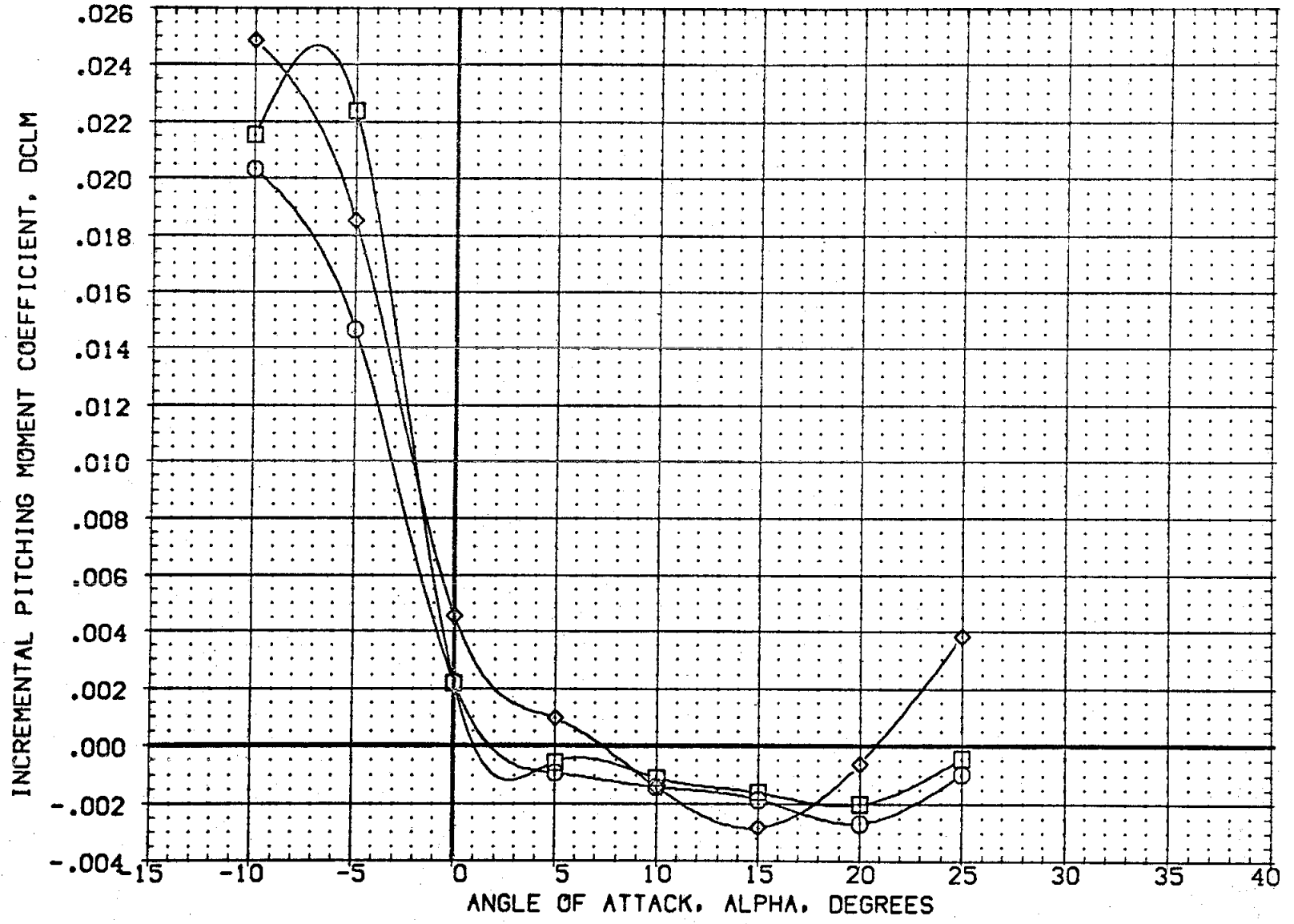


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

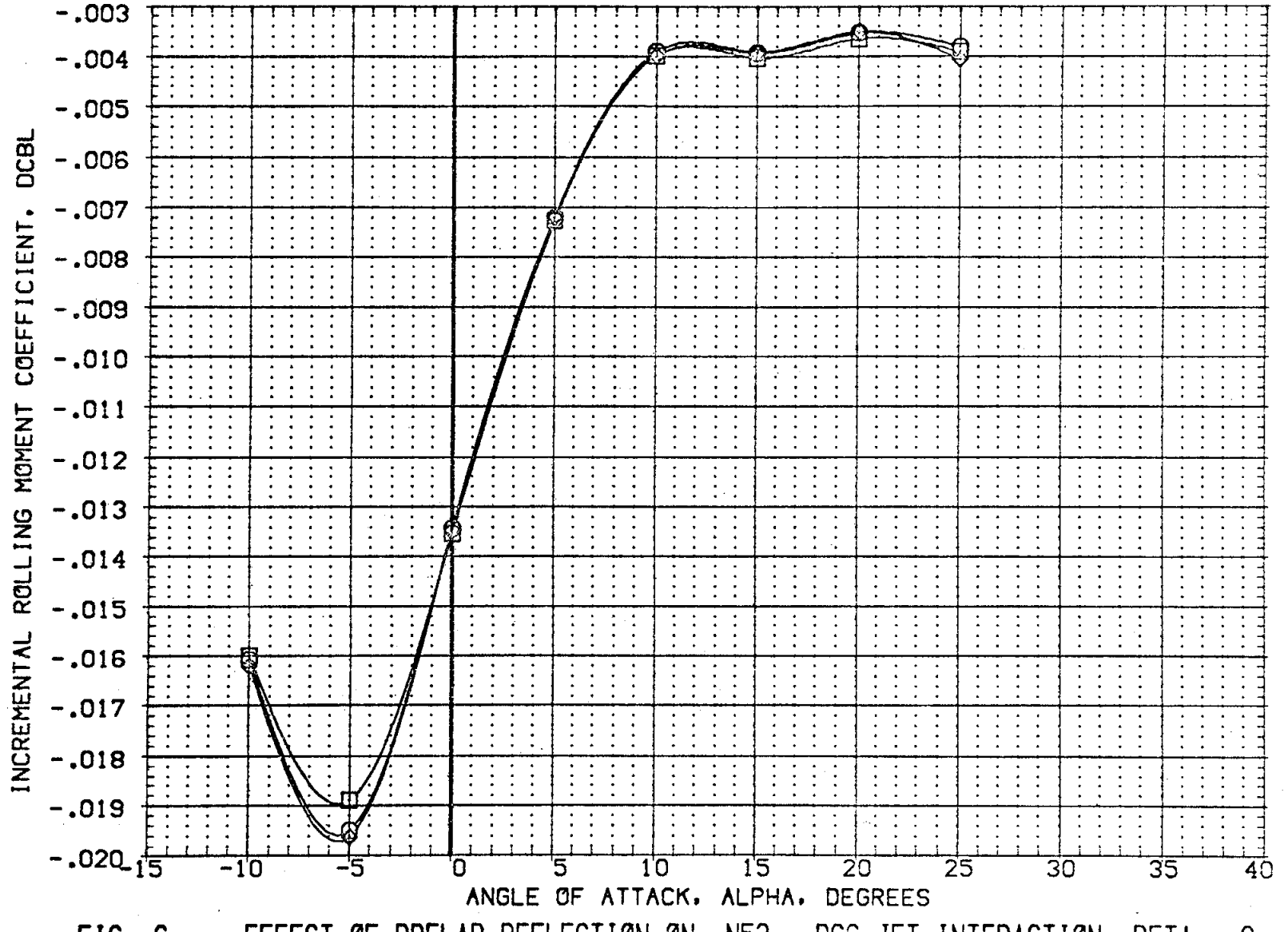


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2014)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(CH2026)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(CH2012)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

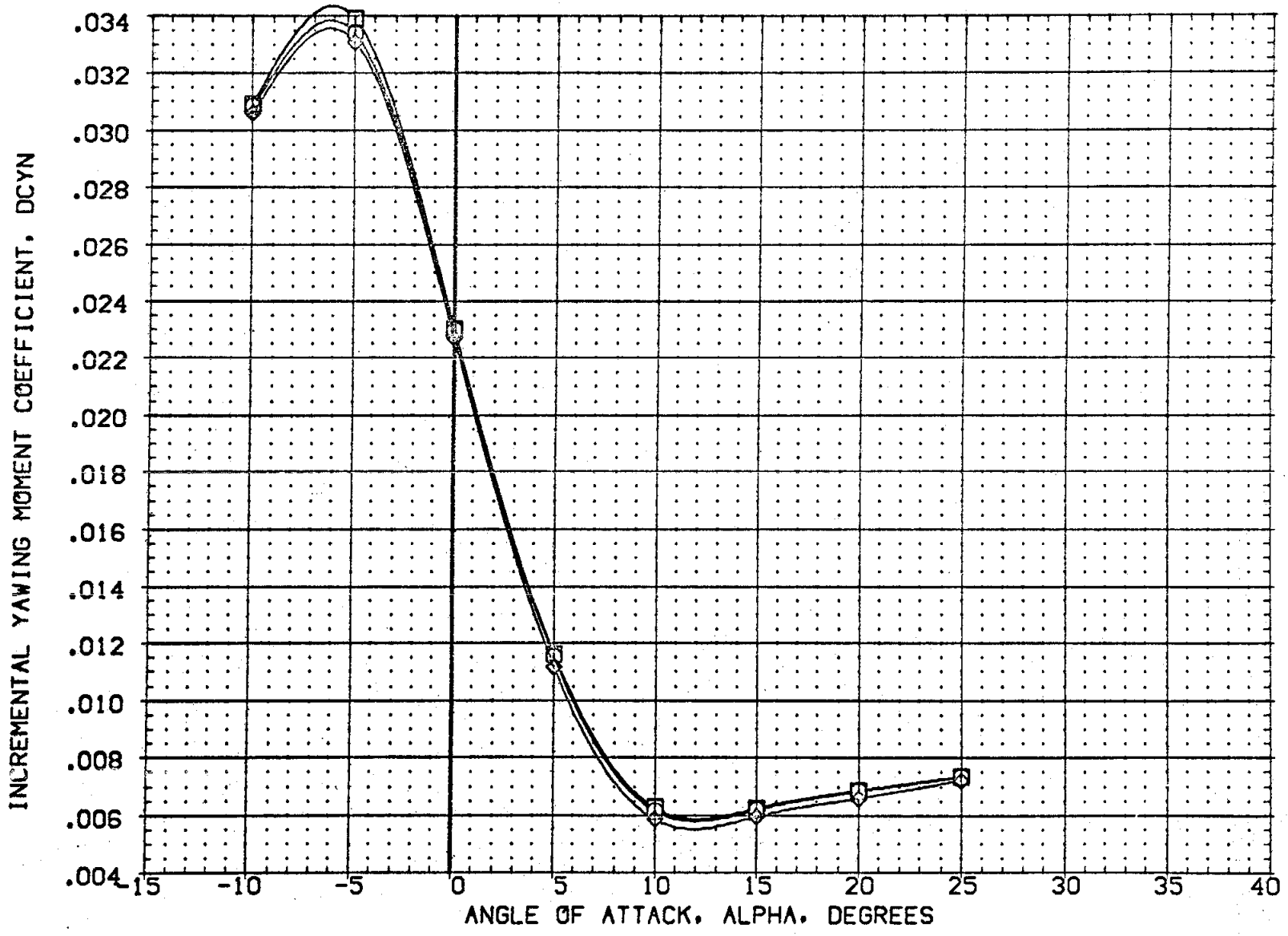


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH214N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(ZH212N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

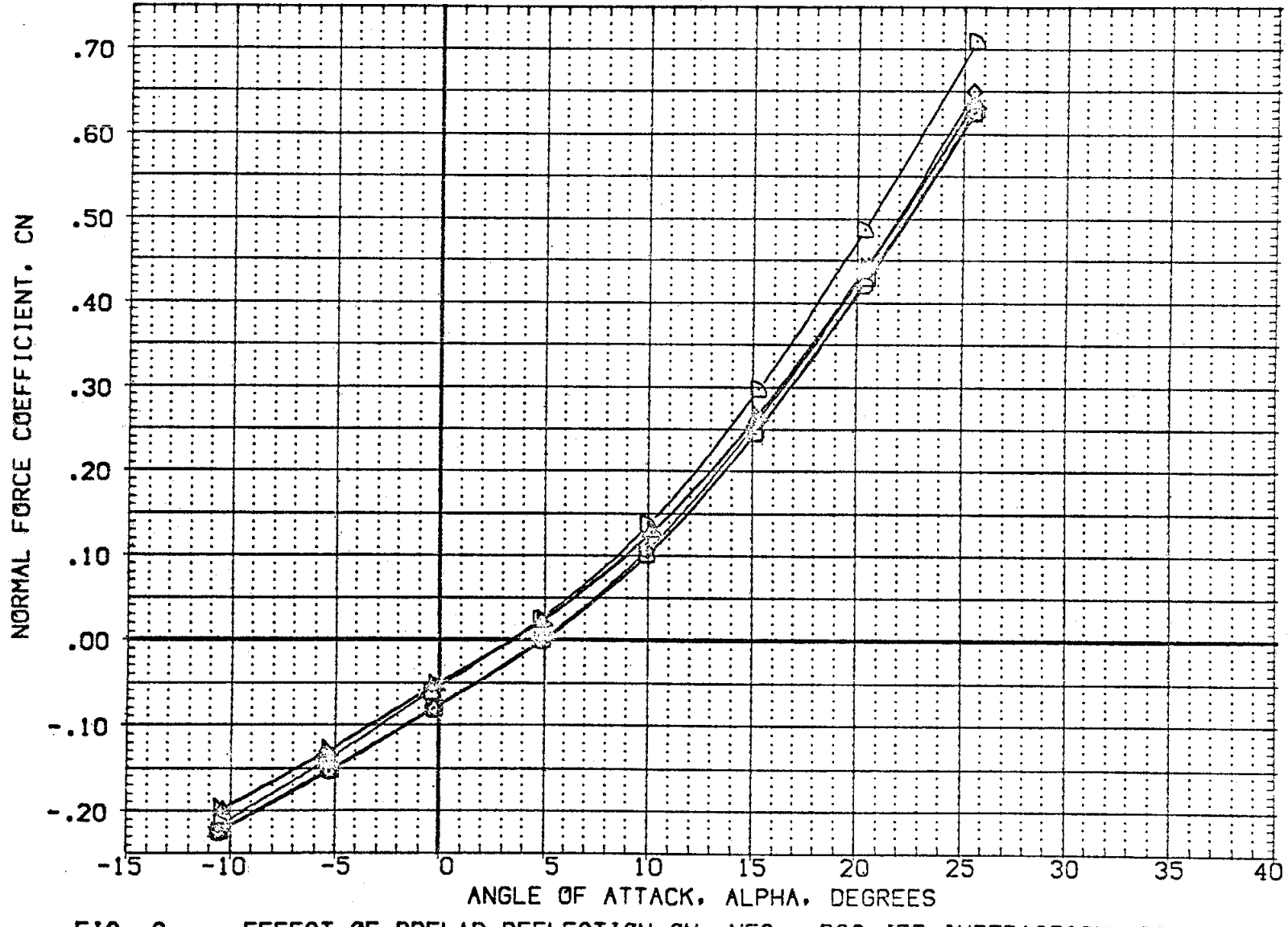


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH214N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(ZH212N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

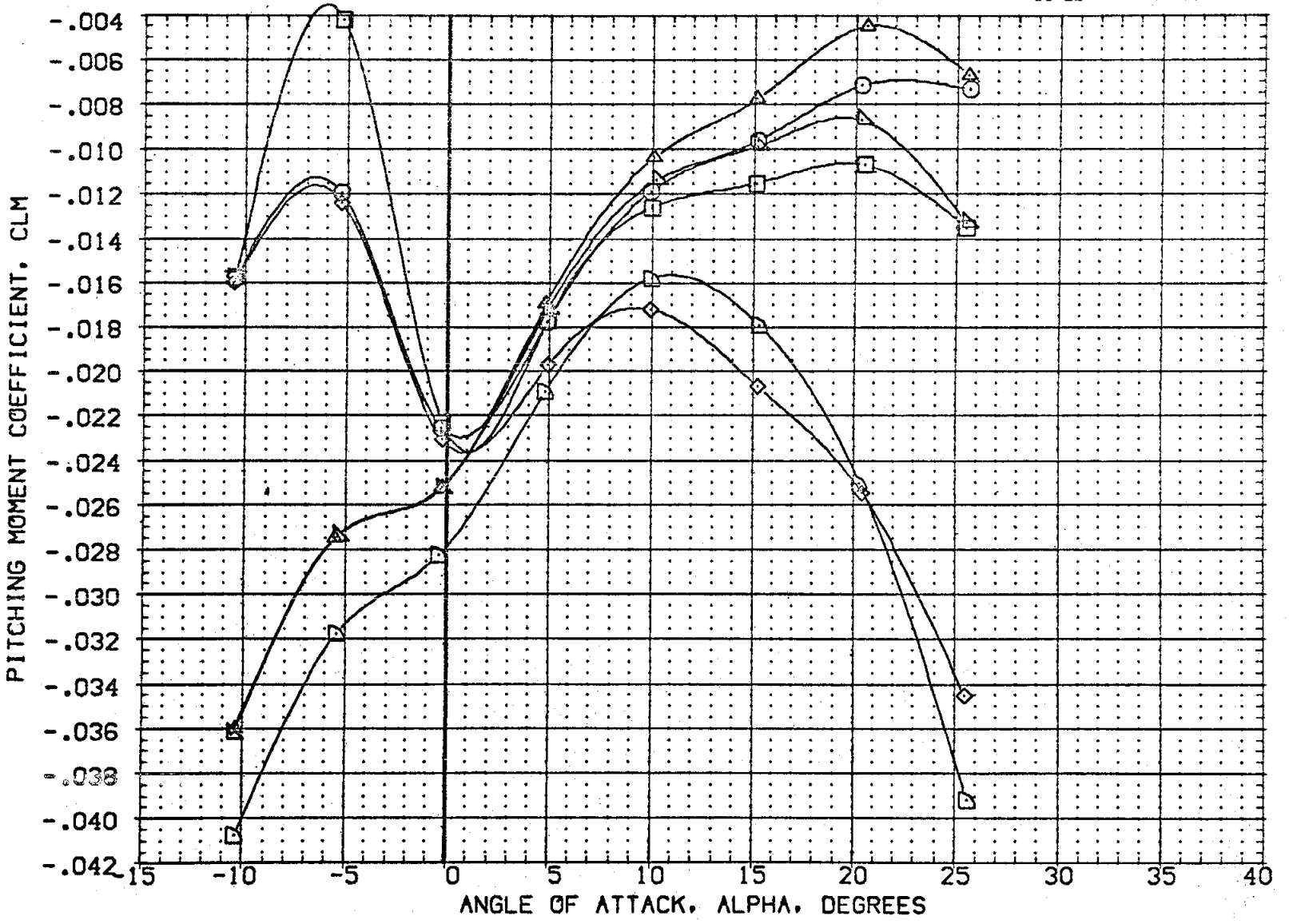


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

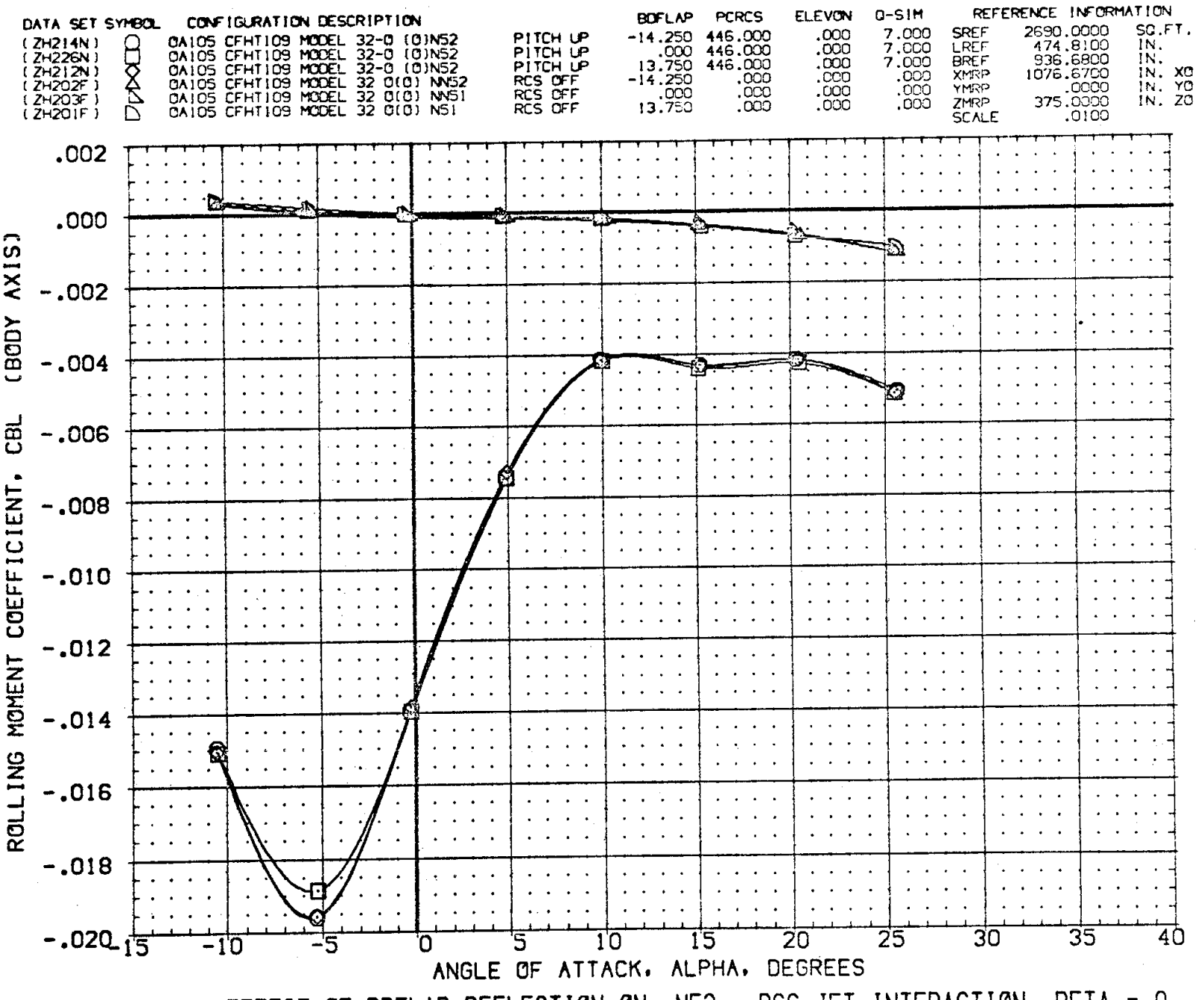


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH214N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	446.000	.000	7.000
(ZH226N)	□	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	.000	446.000	.000	7.000
(ZH212N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	446.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

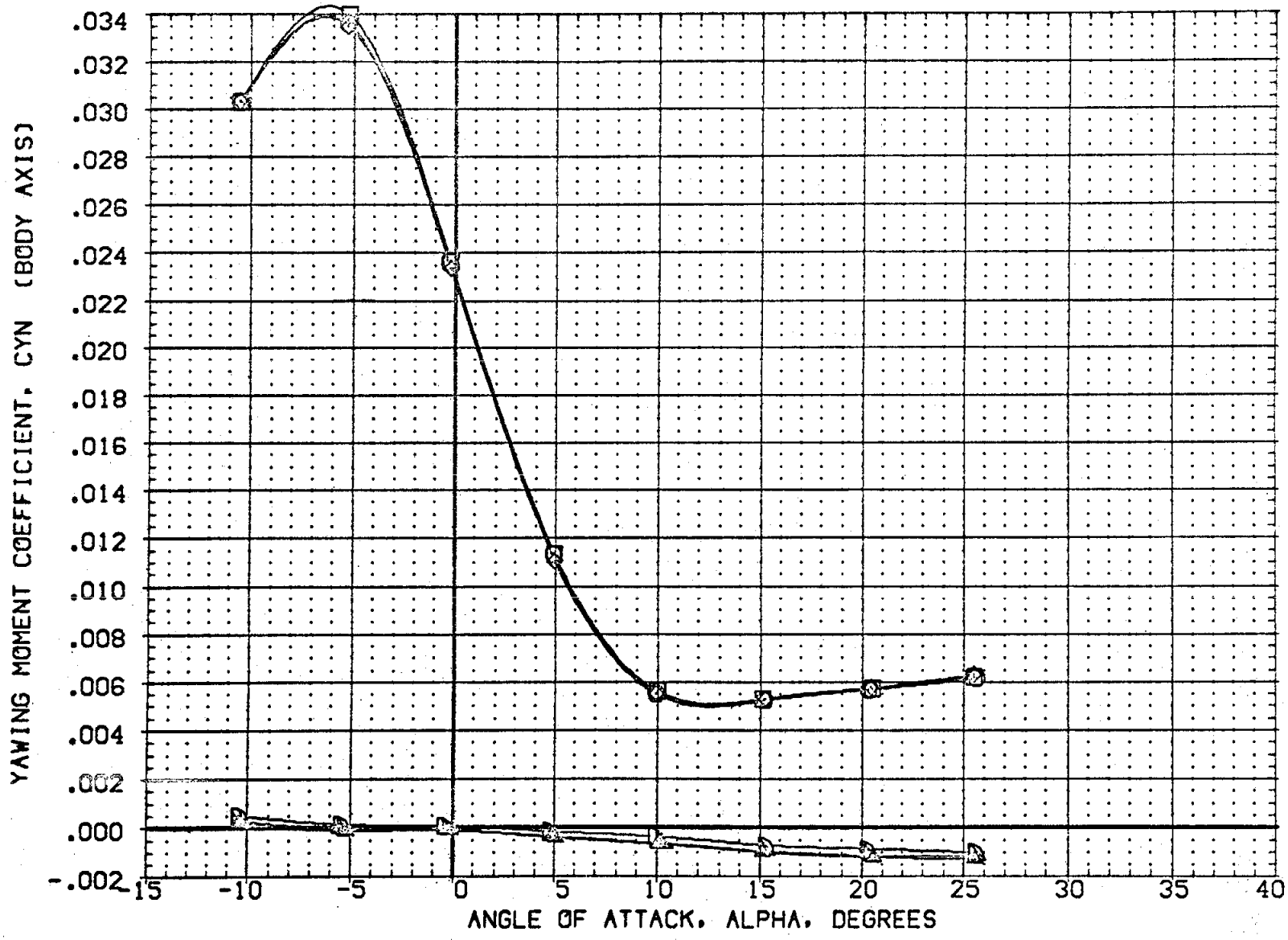


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

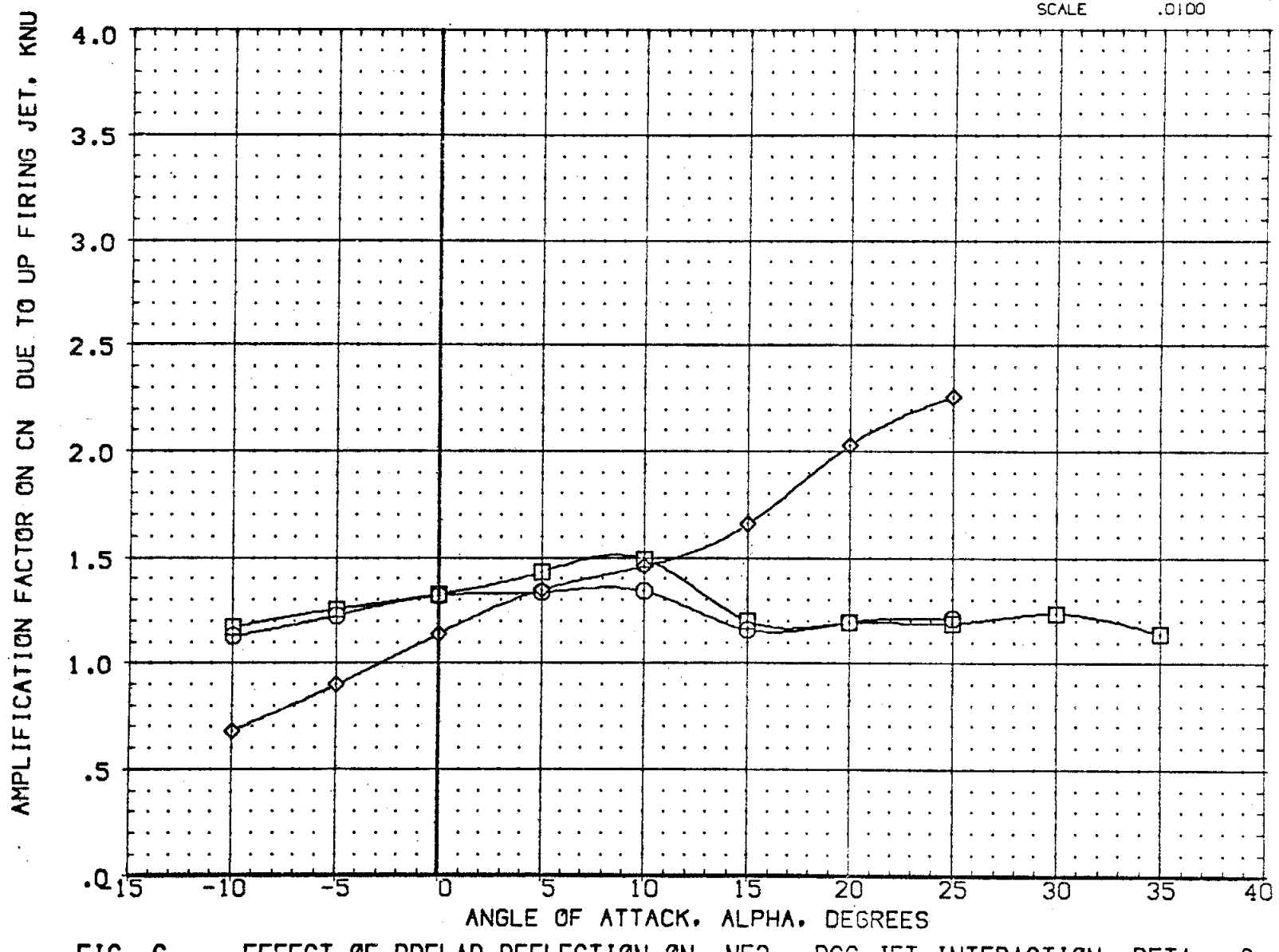


FIG 6 EFFECT ØF BDFLAP DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 0)N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

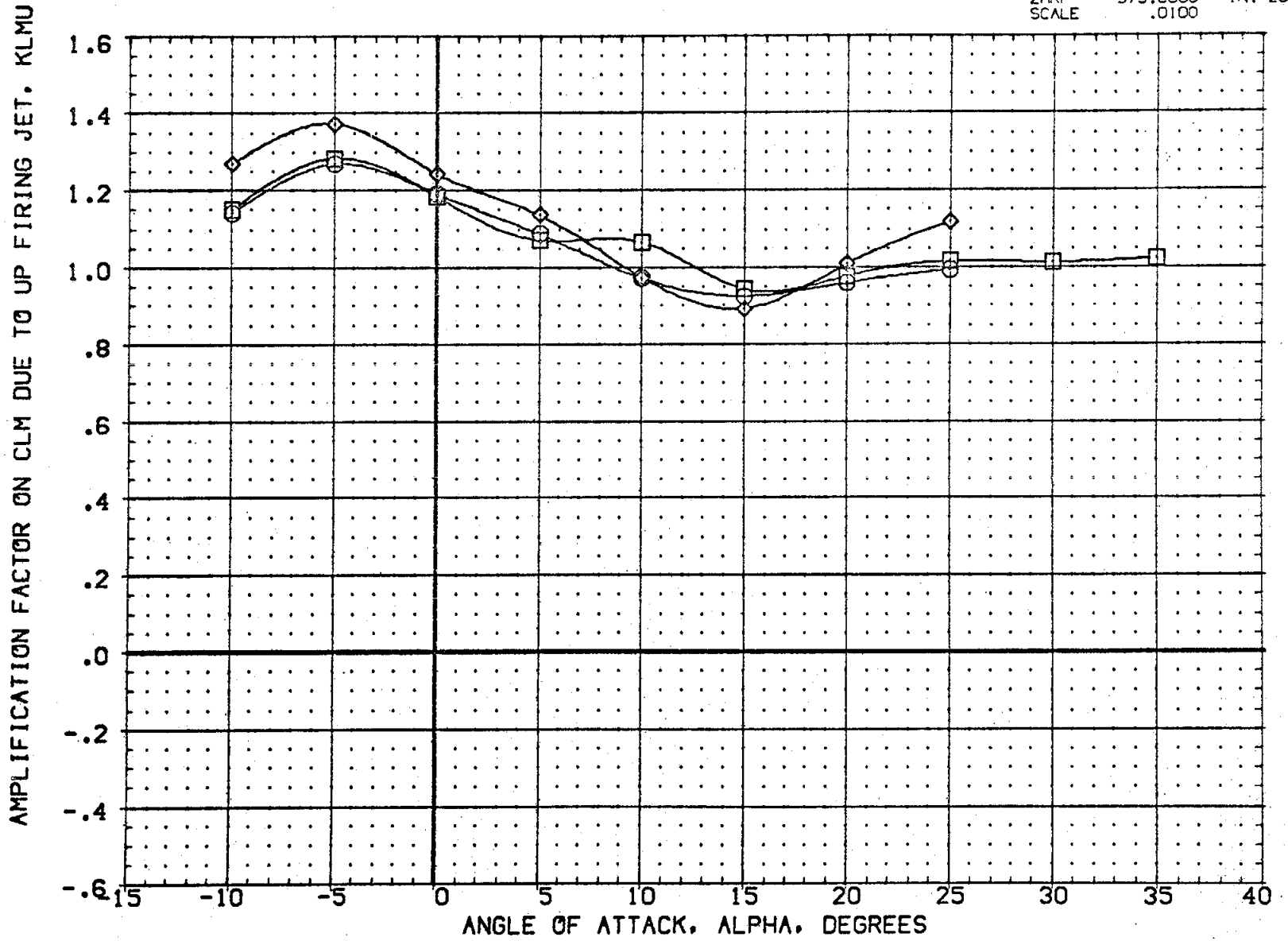


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CD1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

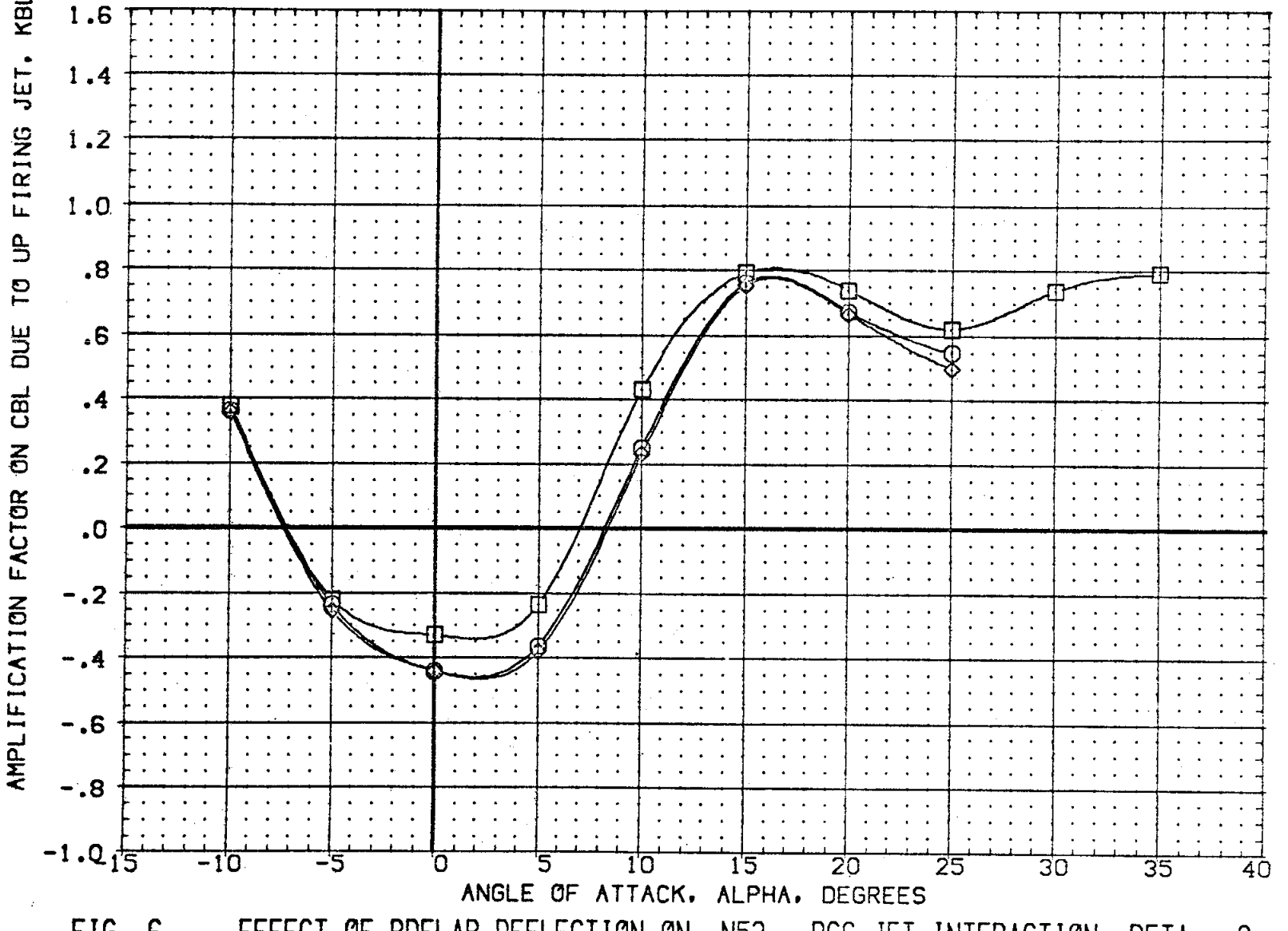


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

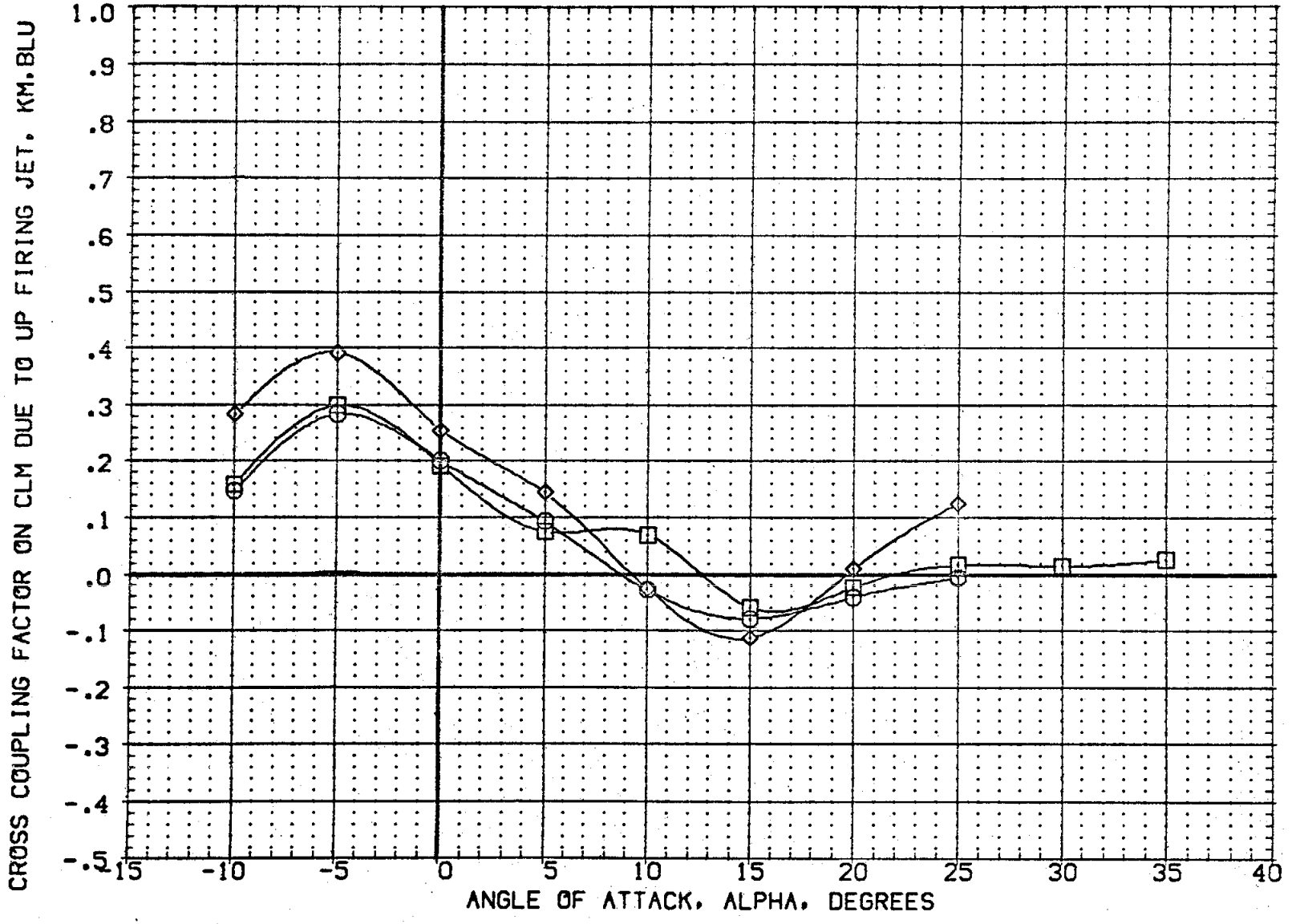


FIG 6 EFFECT ØF BDFLAP DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

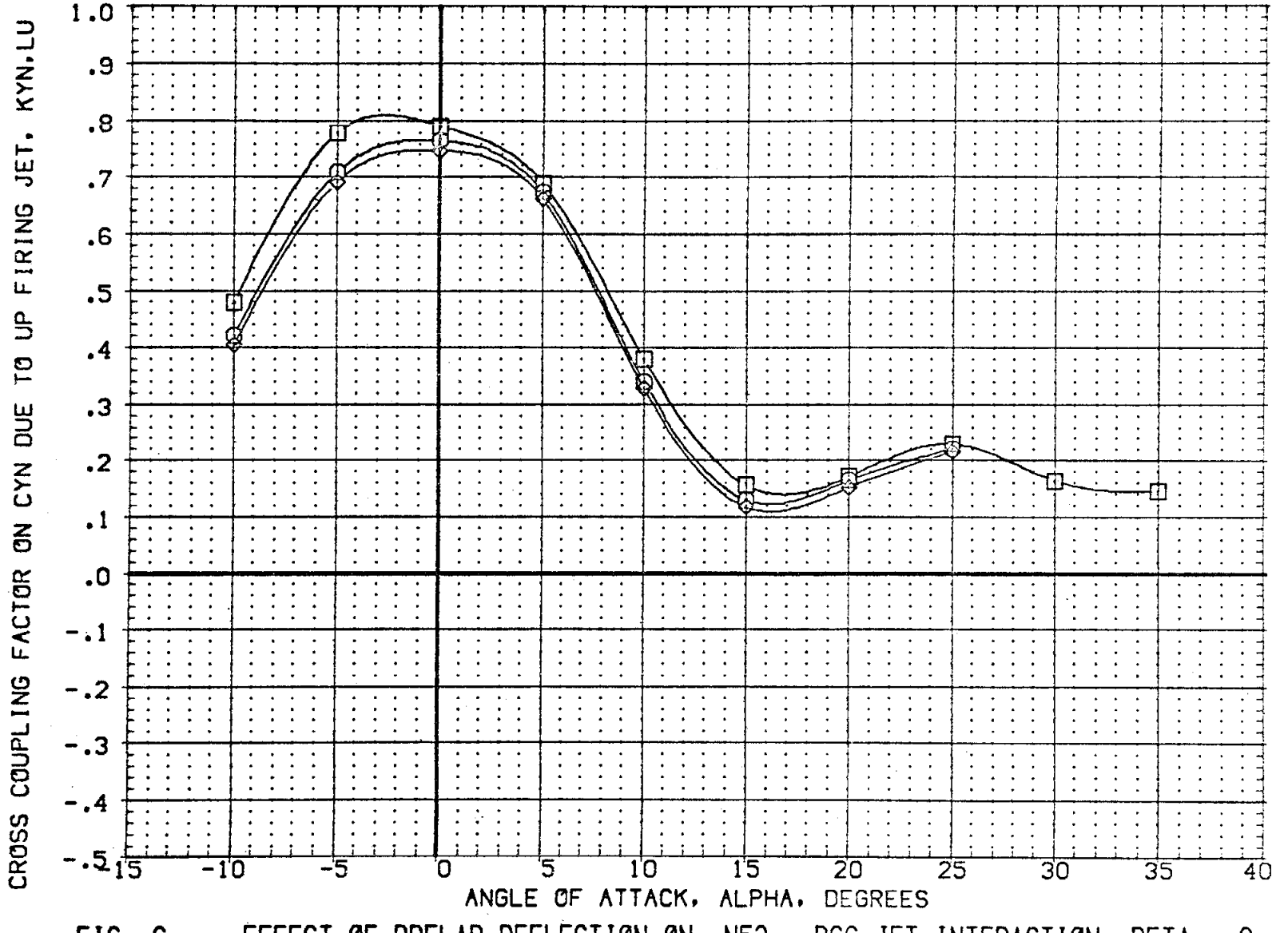


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A10S CFHT10S MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A10S CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

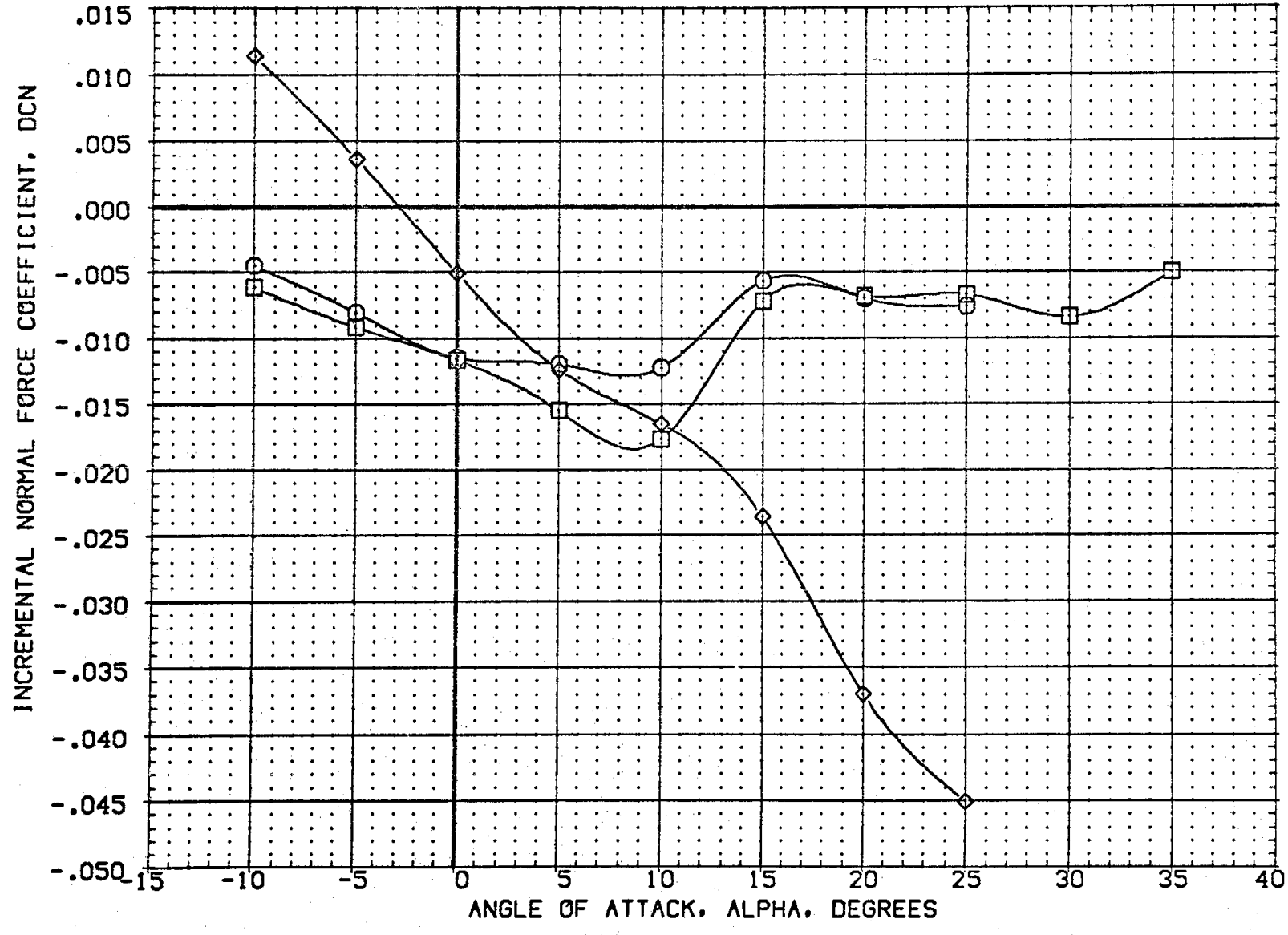


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007) □	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011) ◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

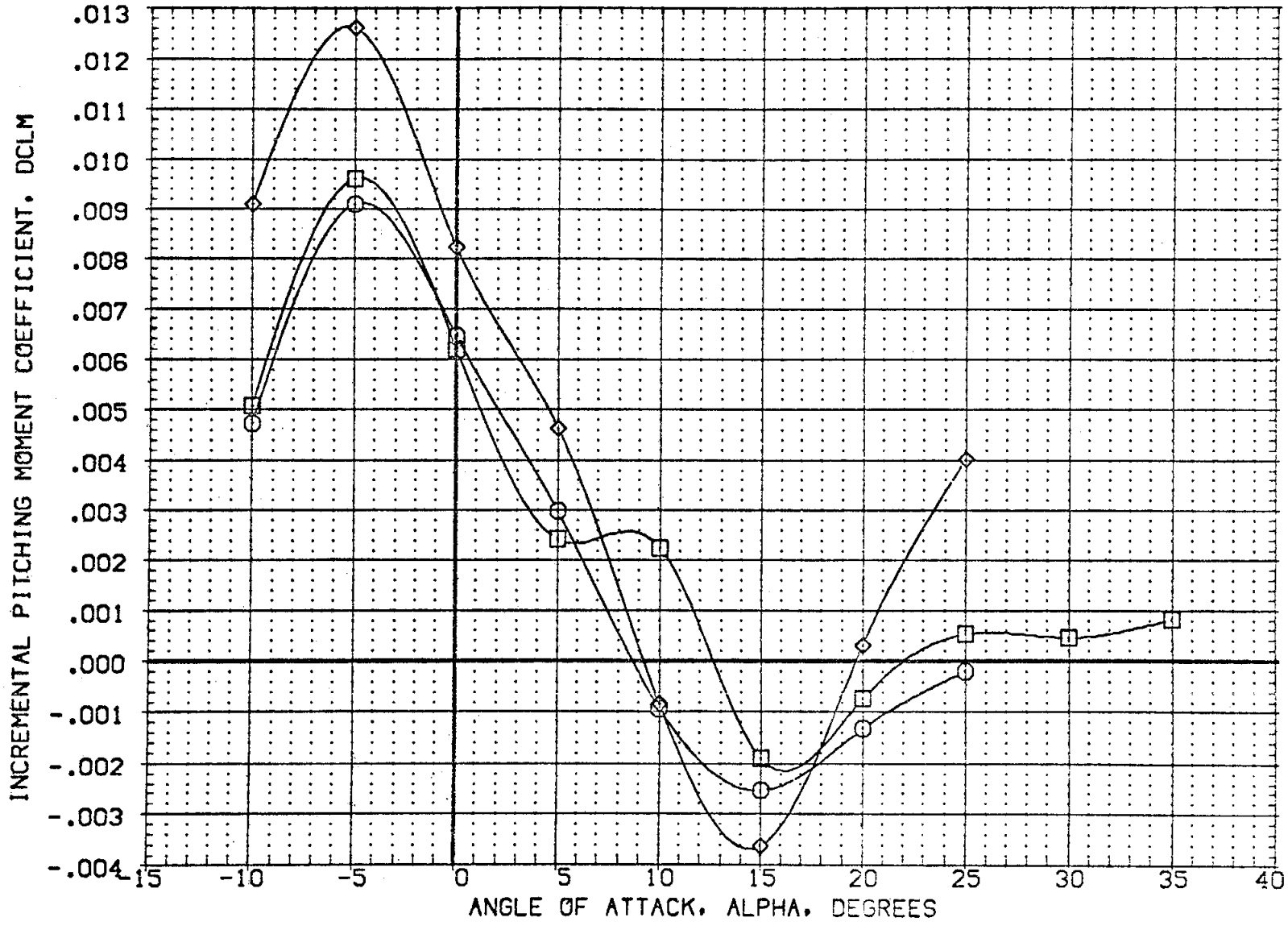


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013) ○	0A105 CFHT105 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007) □	0A-85 CFHT107 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011) ◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

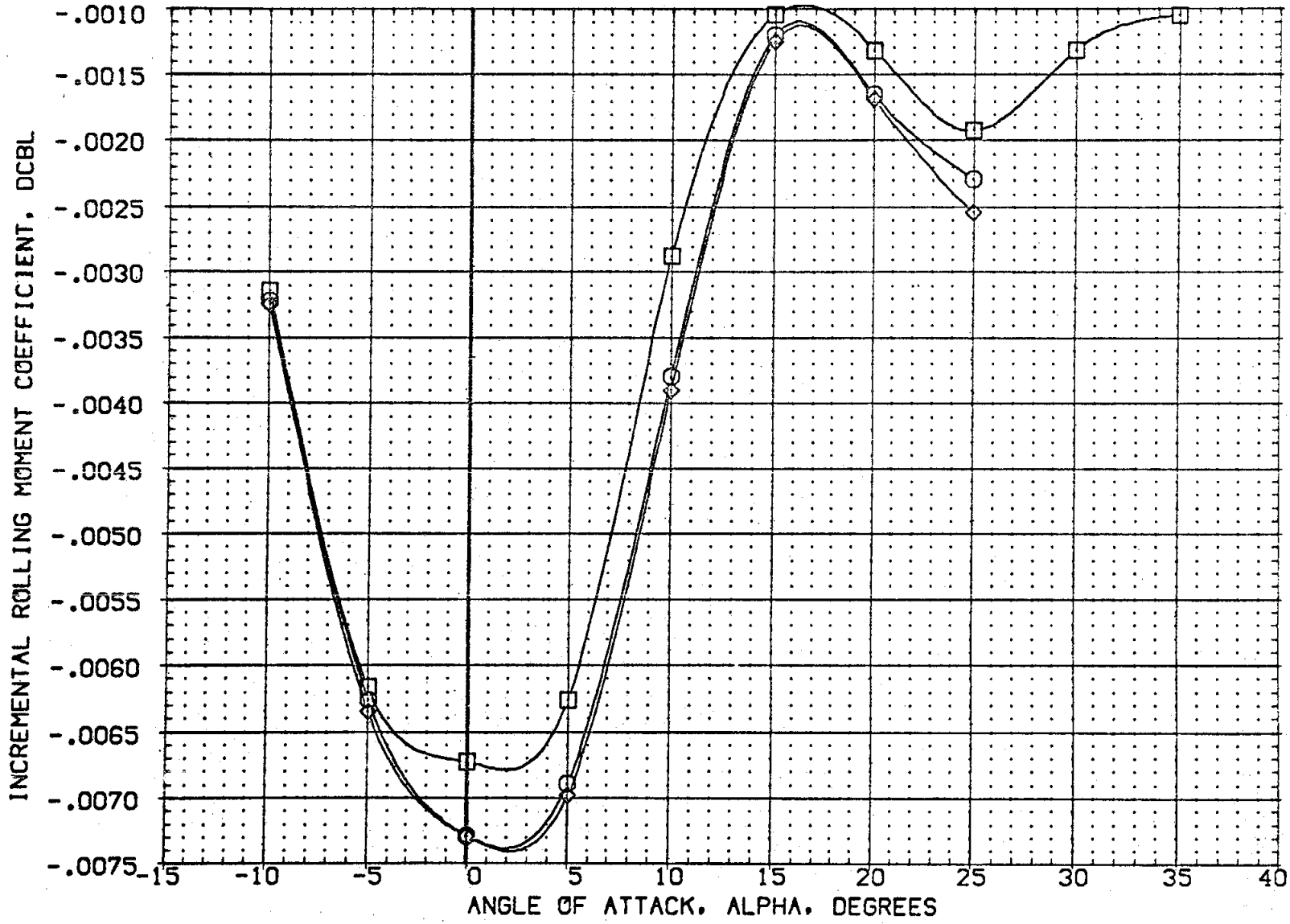


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2013)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(CQ1007)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(CH2011)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

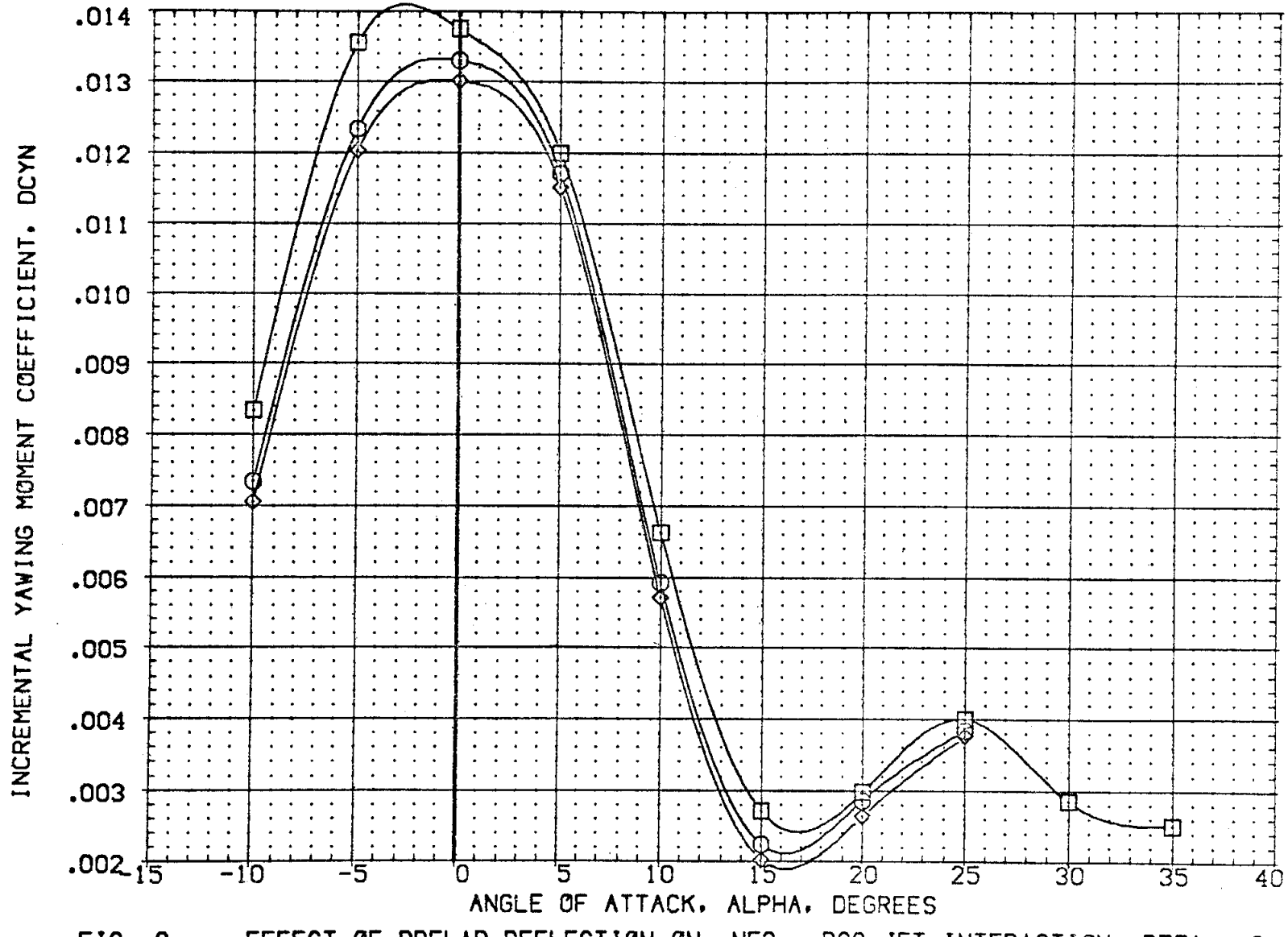


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH213N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(ZQ107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(ZH211N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZQ103F)	▷	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	▽	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

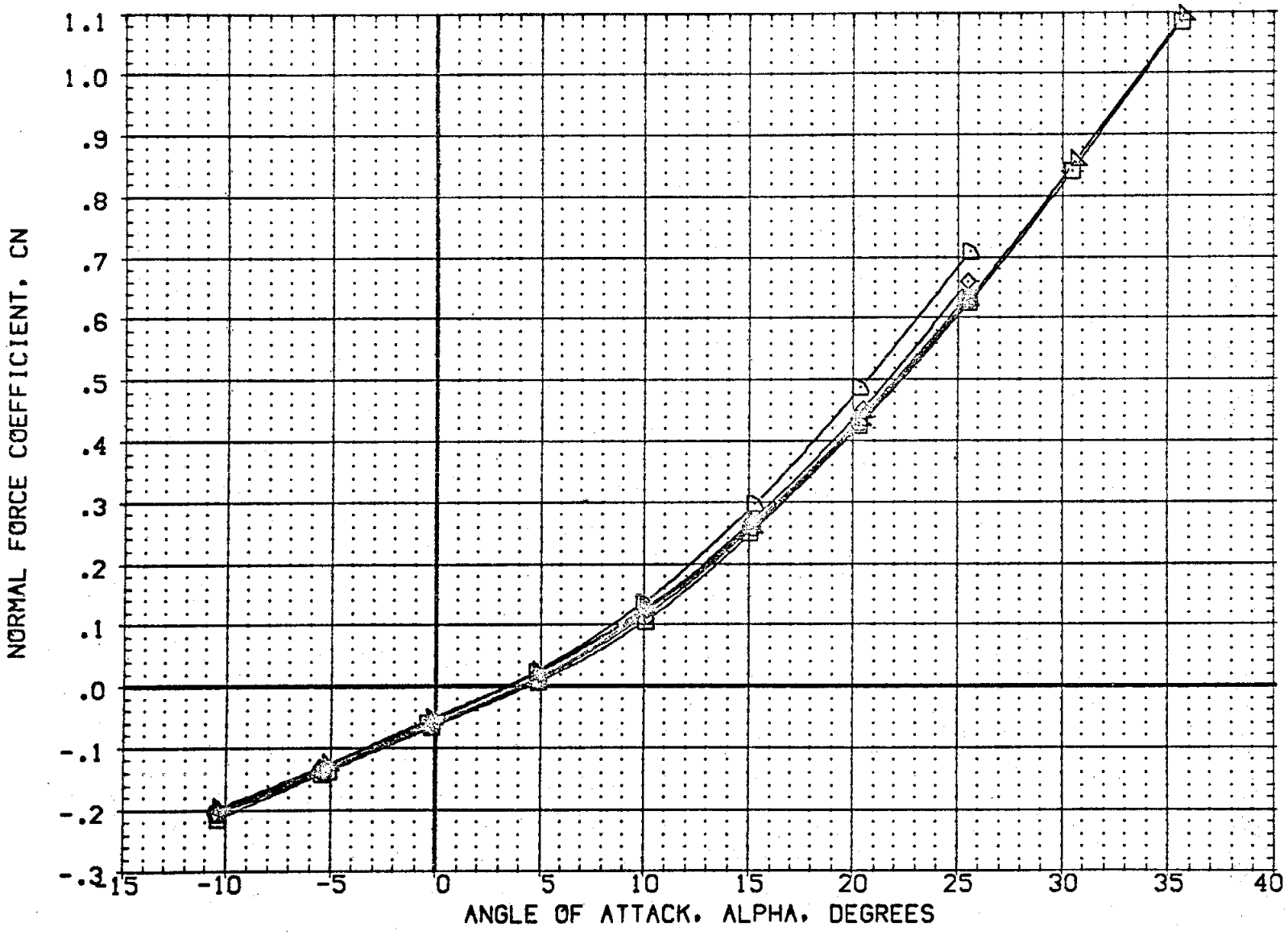


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH213N) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(ZQ107N) □	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(ZH211N) ◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000
(ZH202F) △	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZQ103F) ▷	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F) ▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

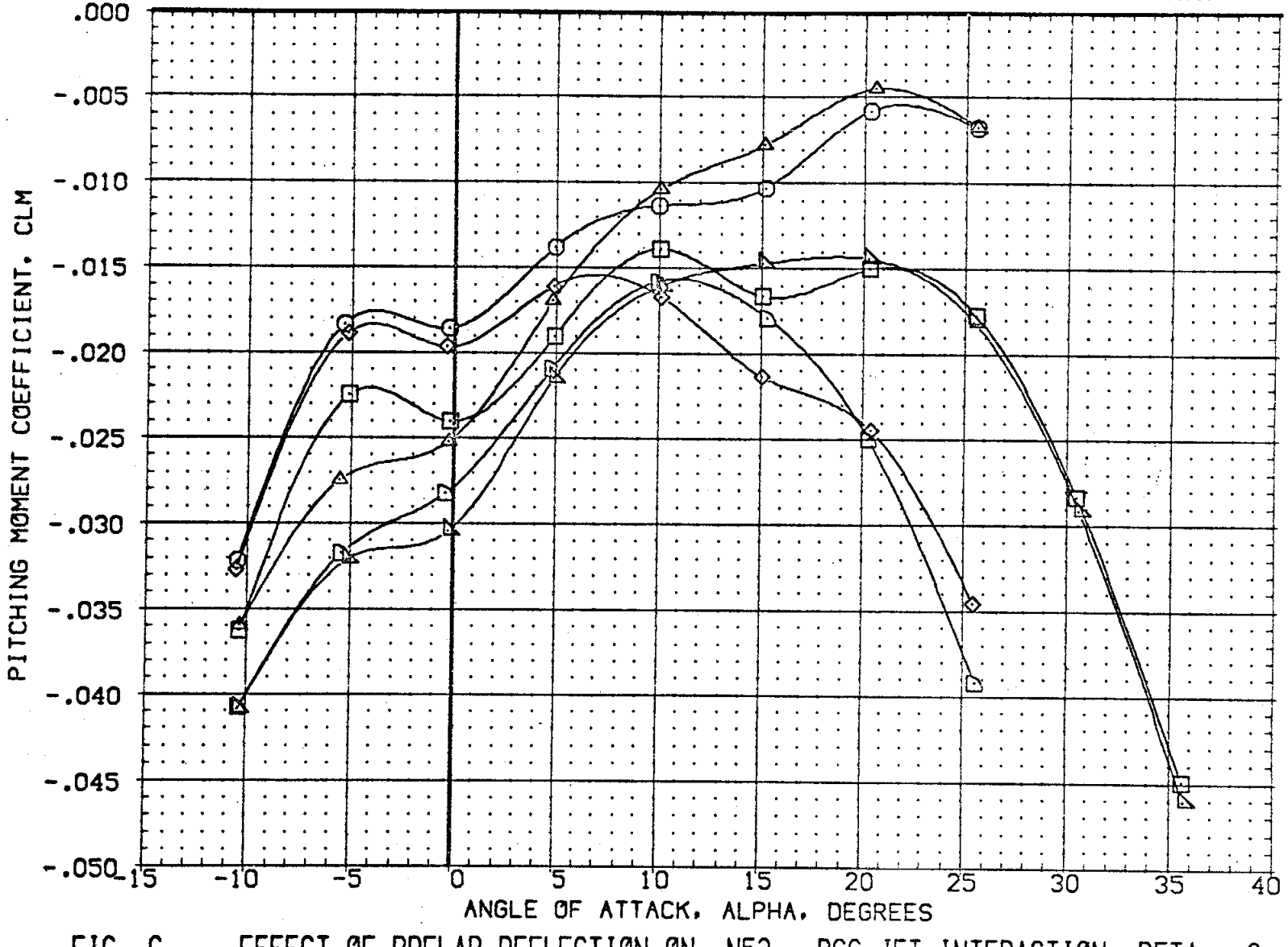


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH213N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(Z0107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(ZH211N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(Z0103F)	▽	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	◁	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

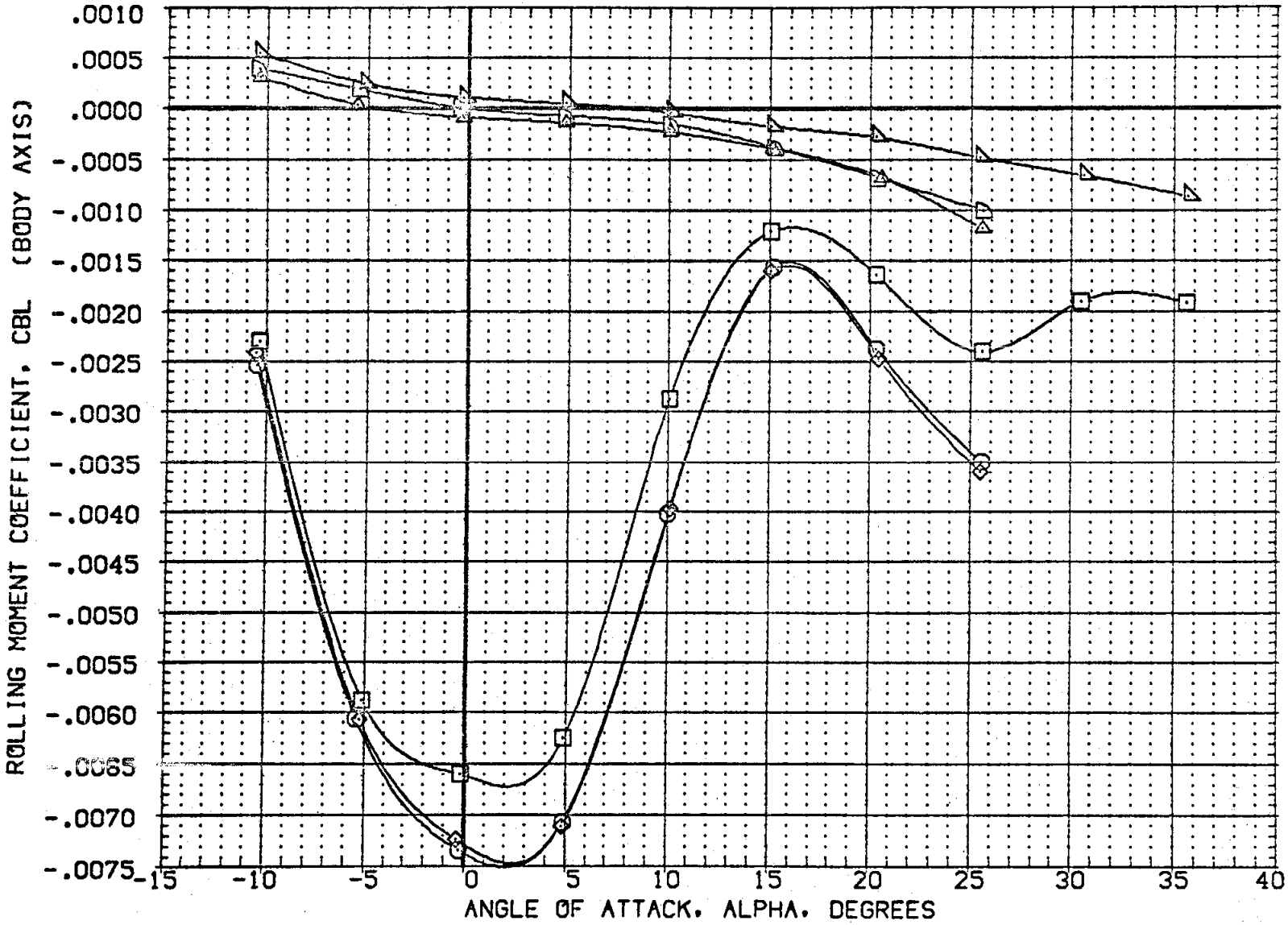


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH213N)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	-14.250	158.000	.000	20.000
(ZQ107N)	□	0A-85 CFHT101 MODEL 32-0 01N52	PITCH UP	.000	158.000	.000	20.000
(ZH211N)	◇	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZQ103F)	◁	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

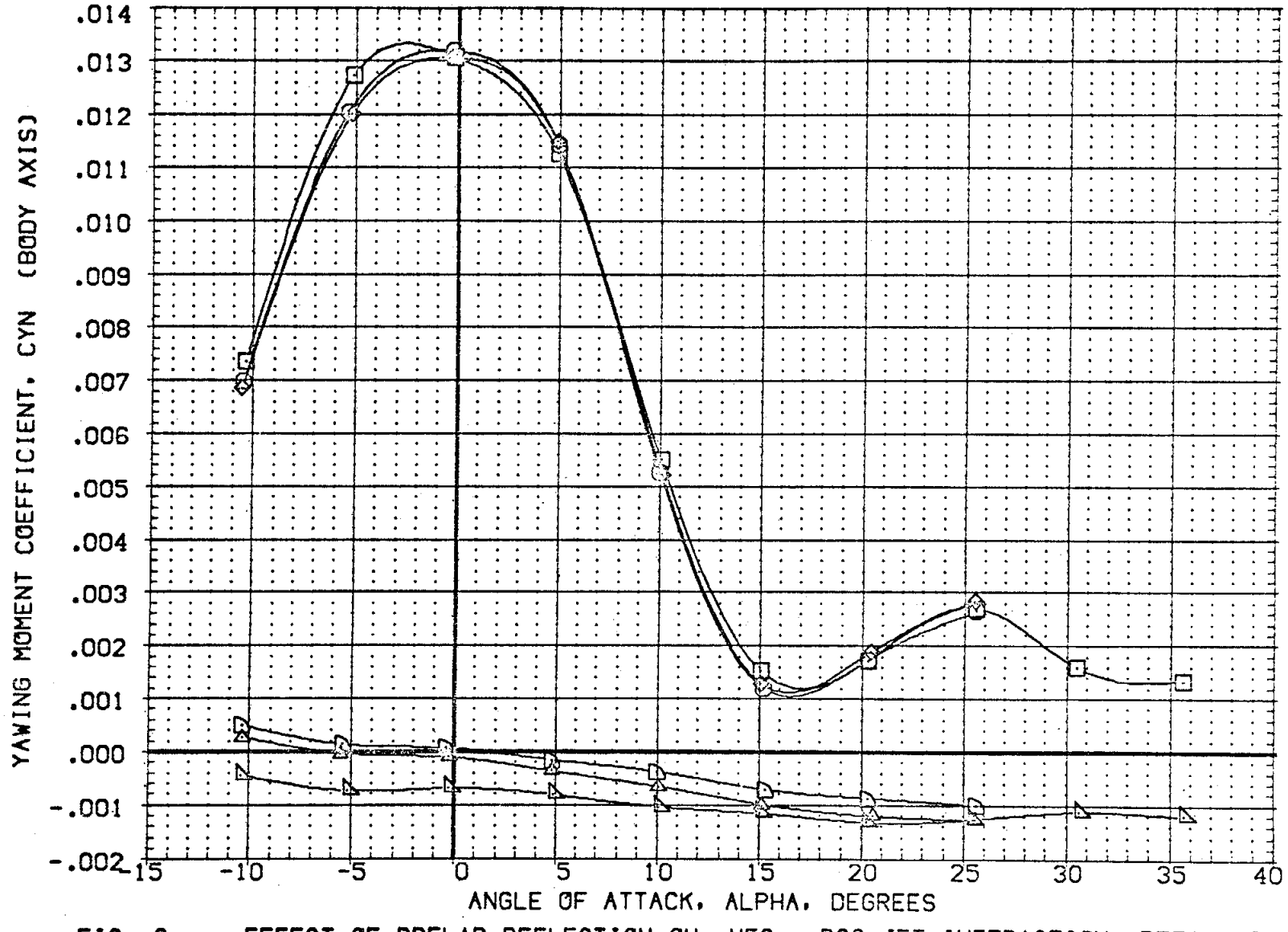


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	D-SIM
(CH2010) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

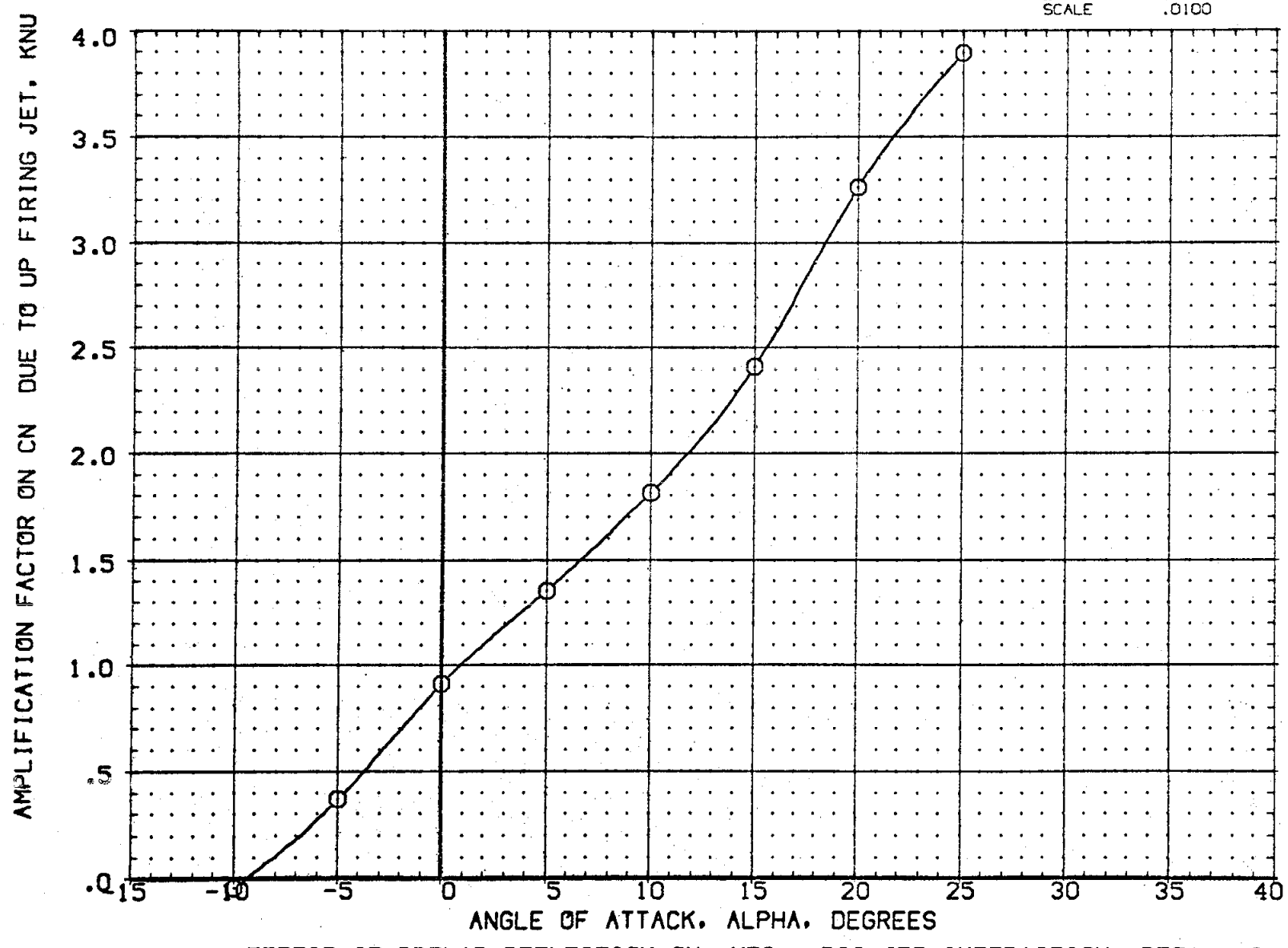


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

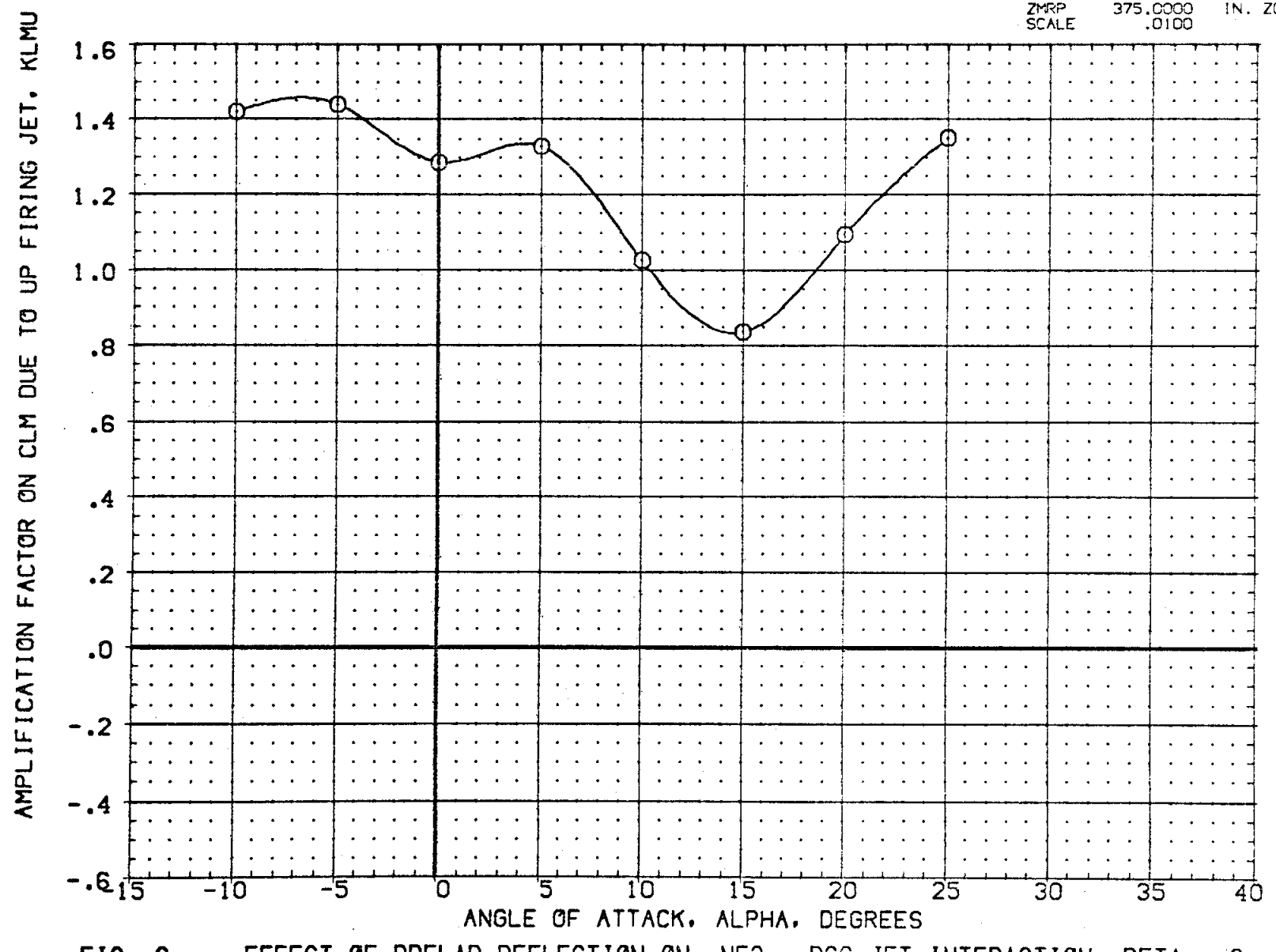


FIG 6 EFFECT ØF BDFLAP DEFLECTIØN ØN N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010)	○	0A10S CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

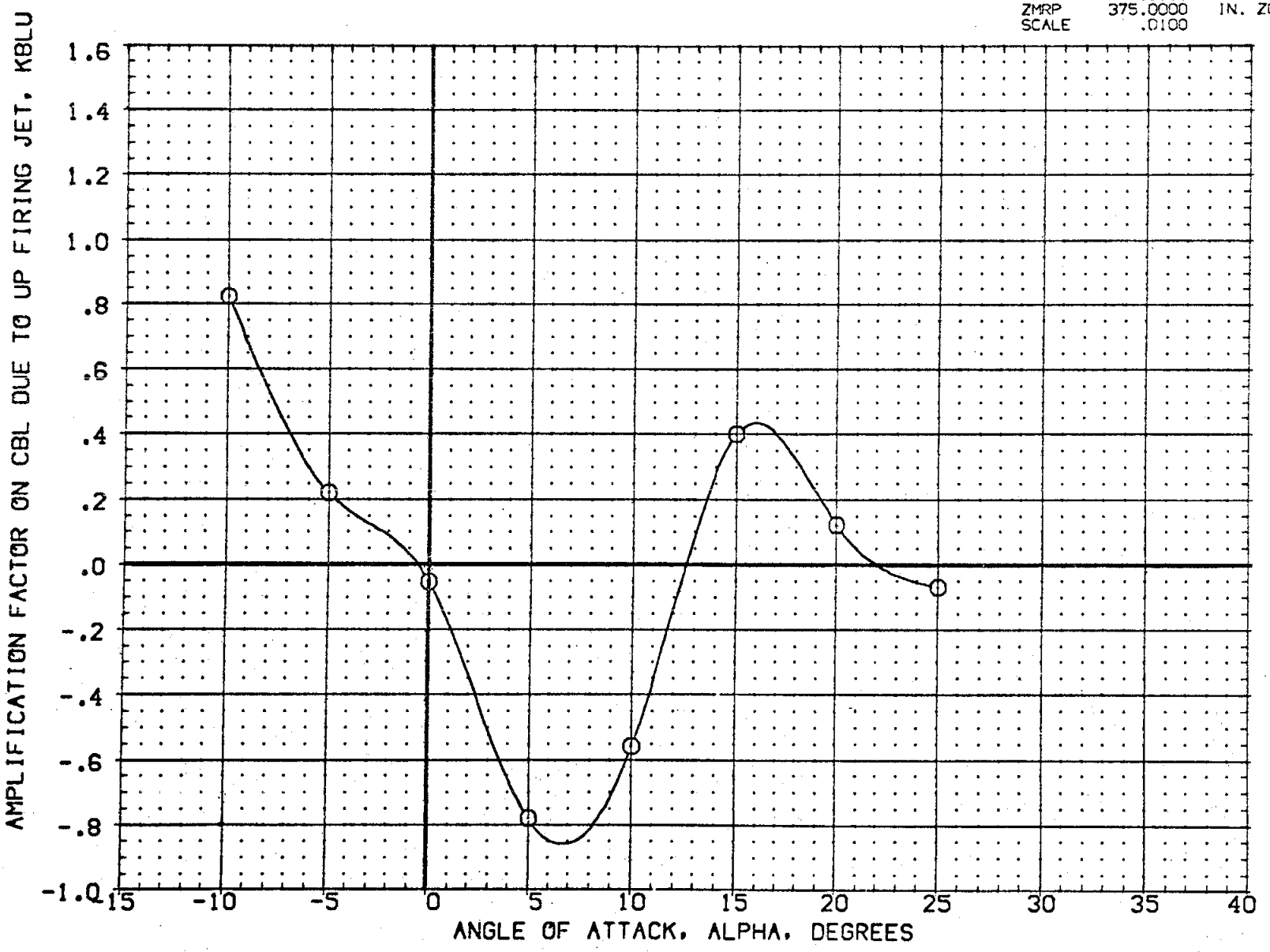


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

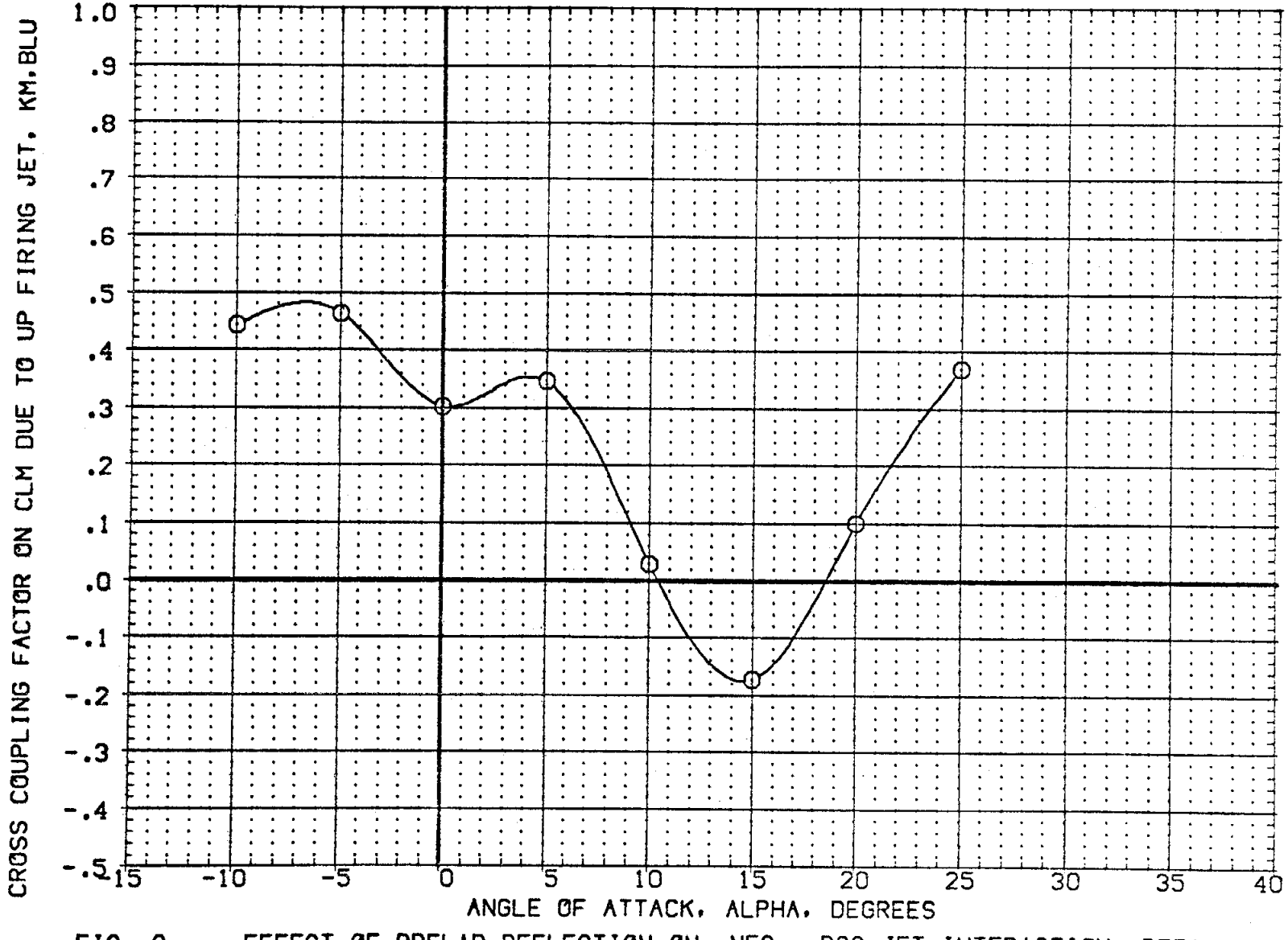


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	DAIDS CF 108 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

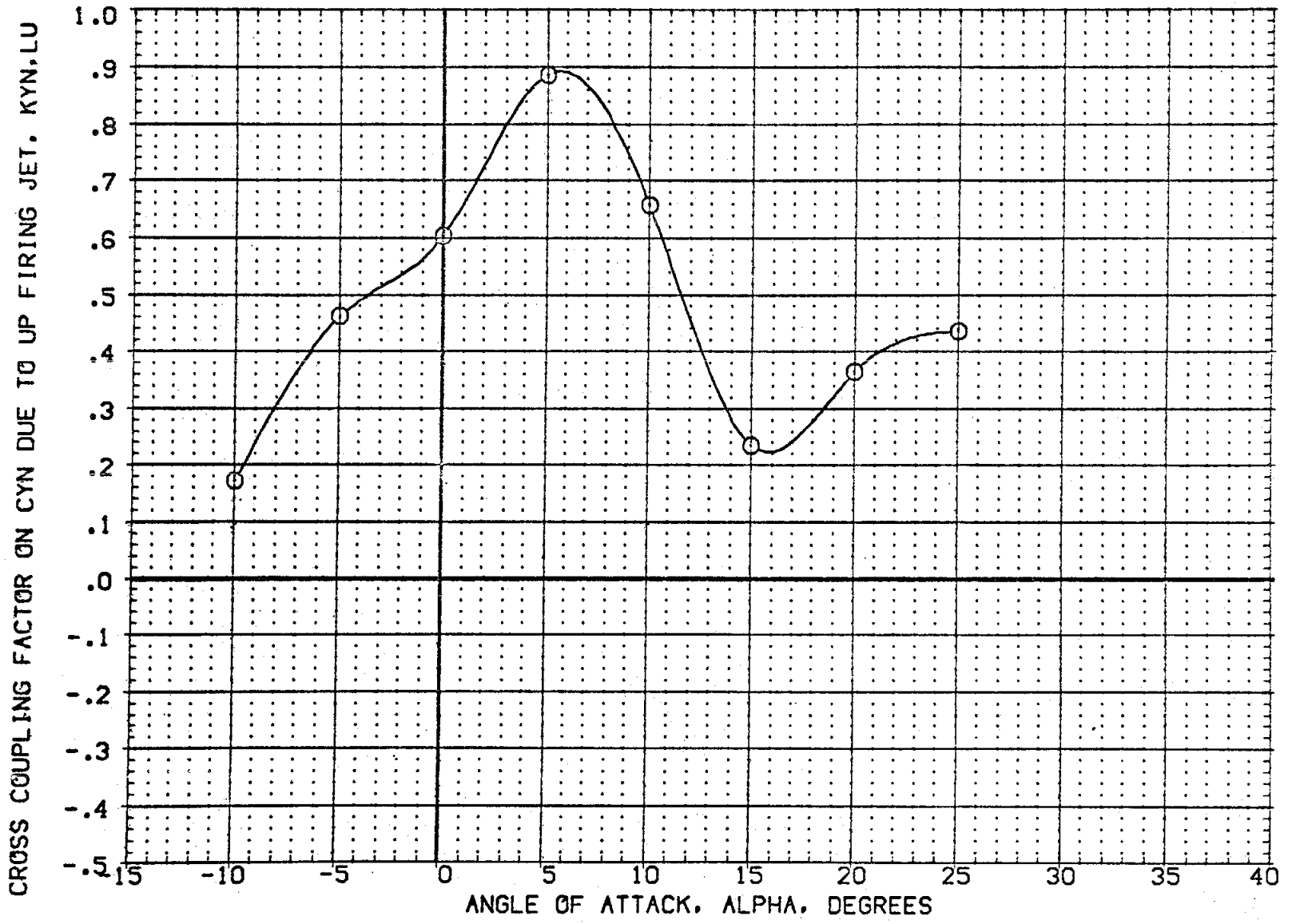


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

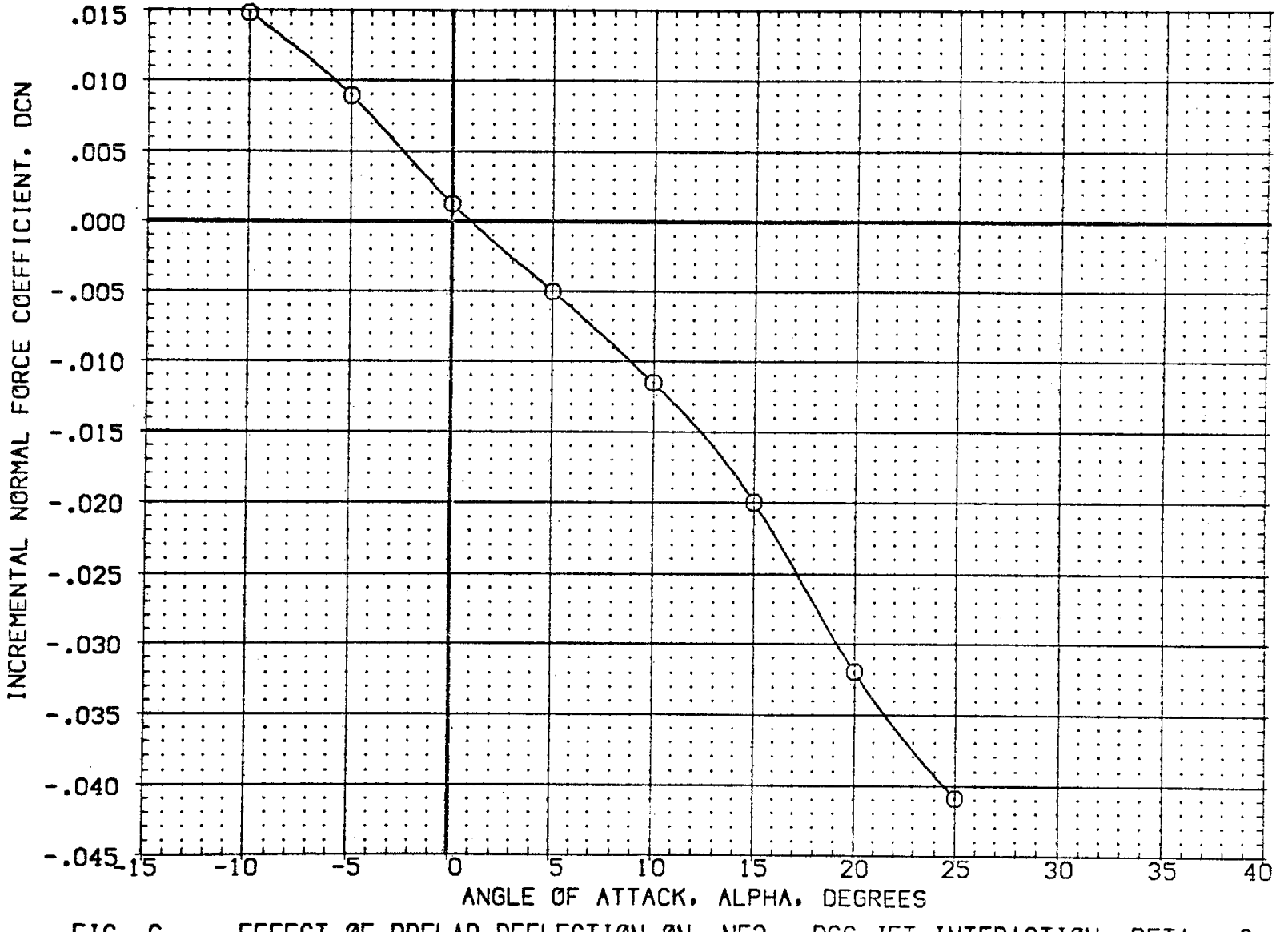


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	0A10S CFHT10S MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

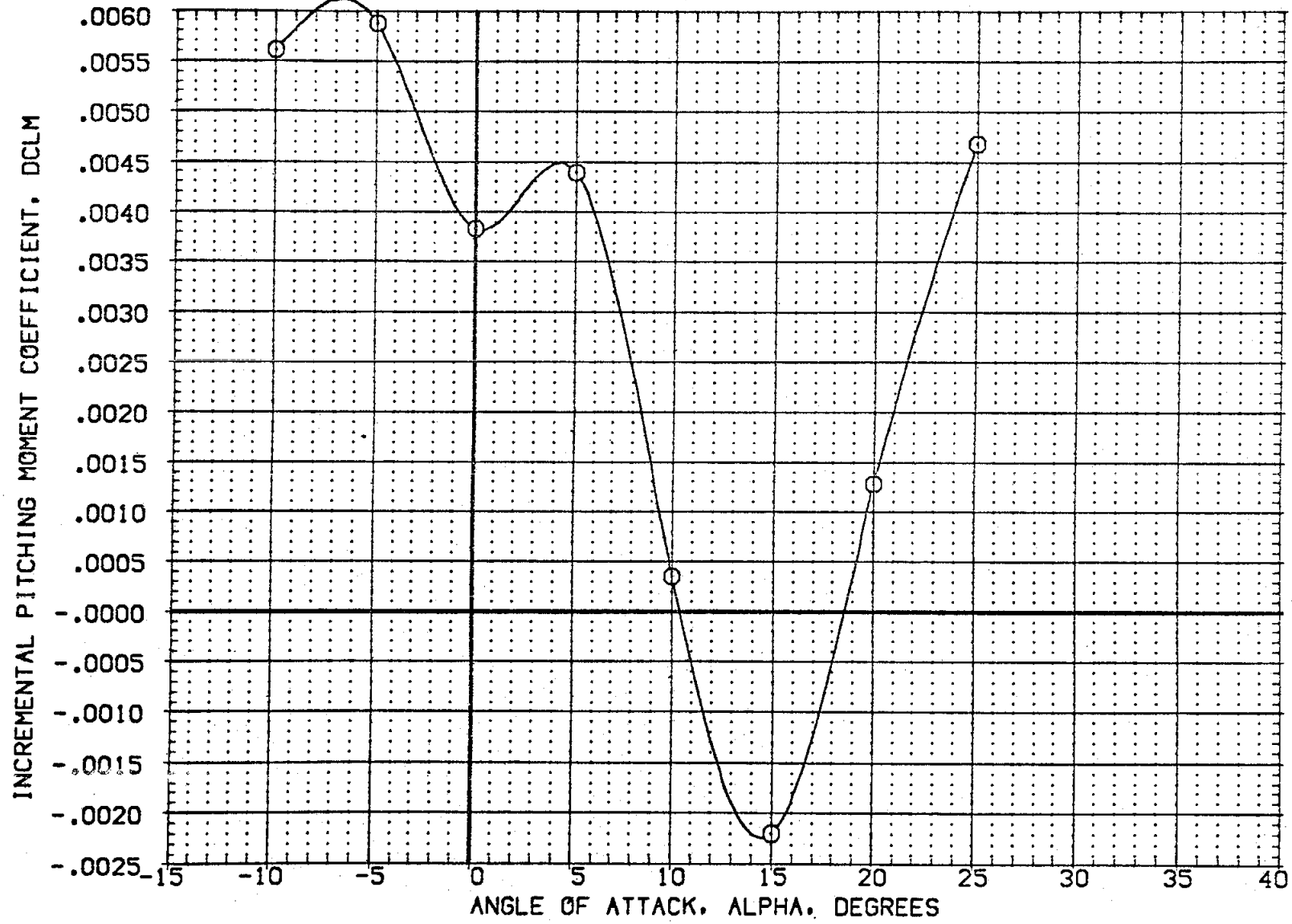


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	BA105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

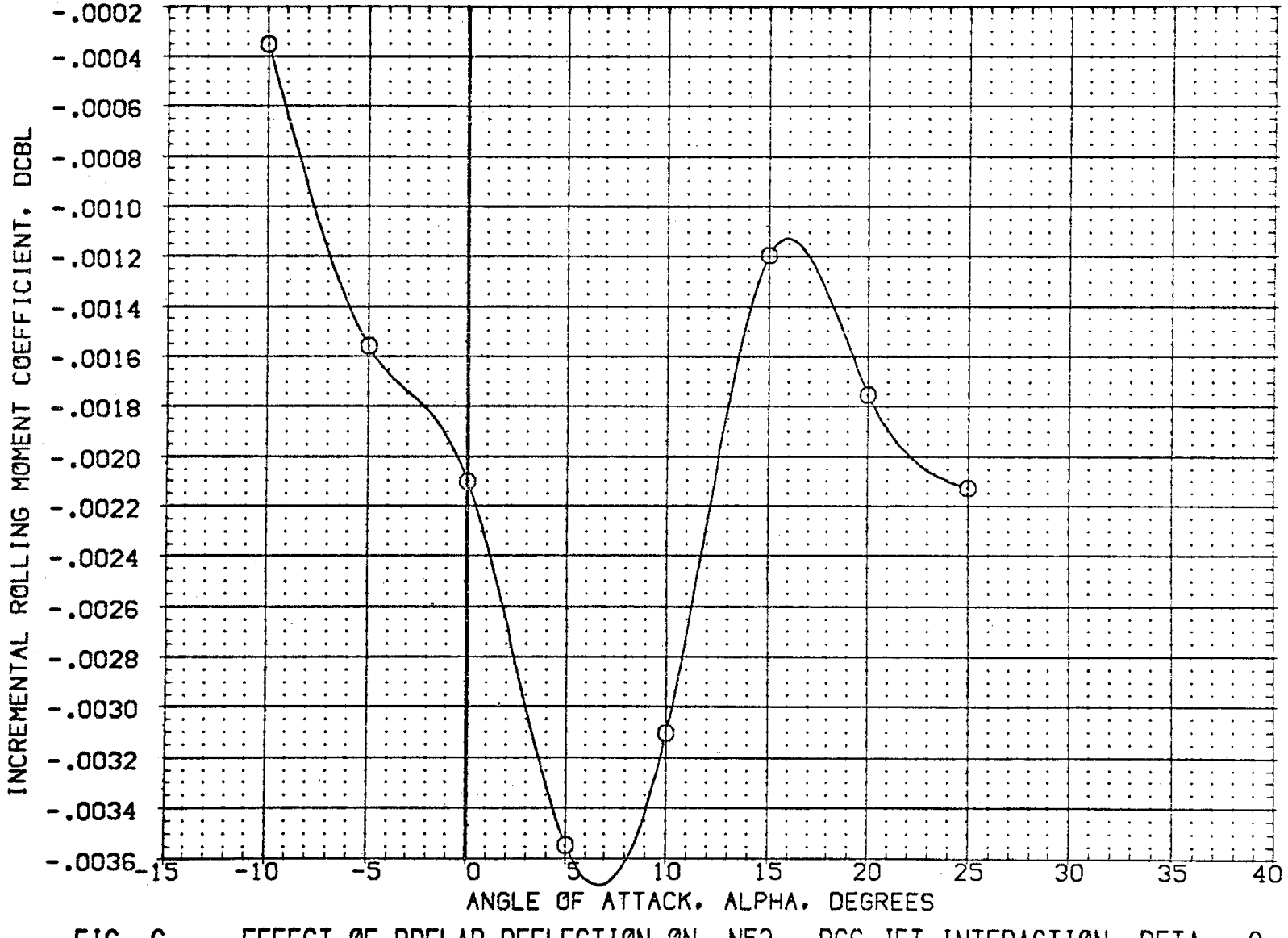


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2010) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

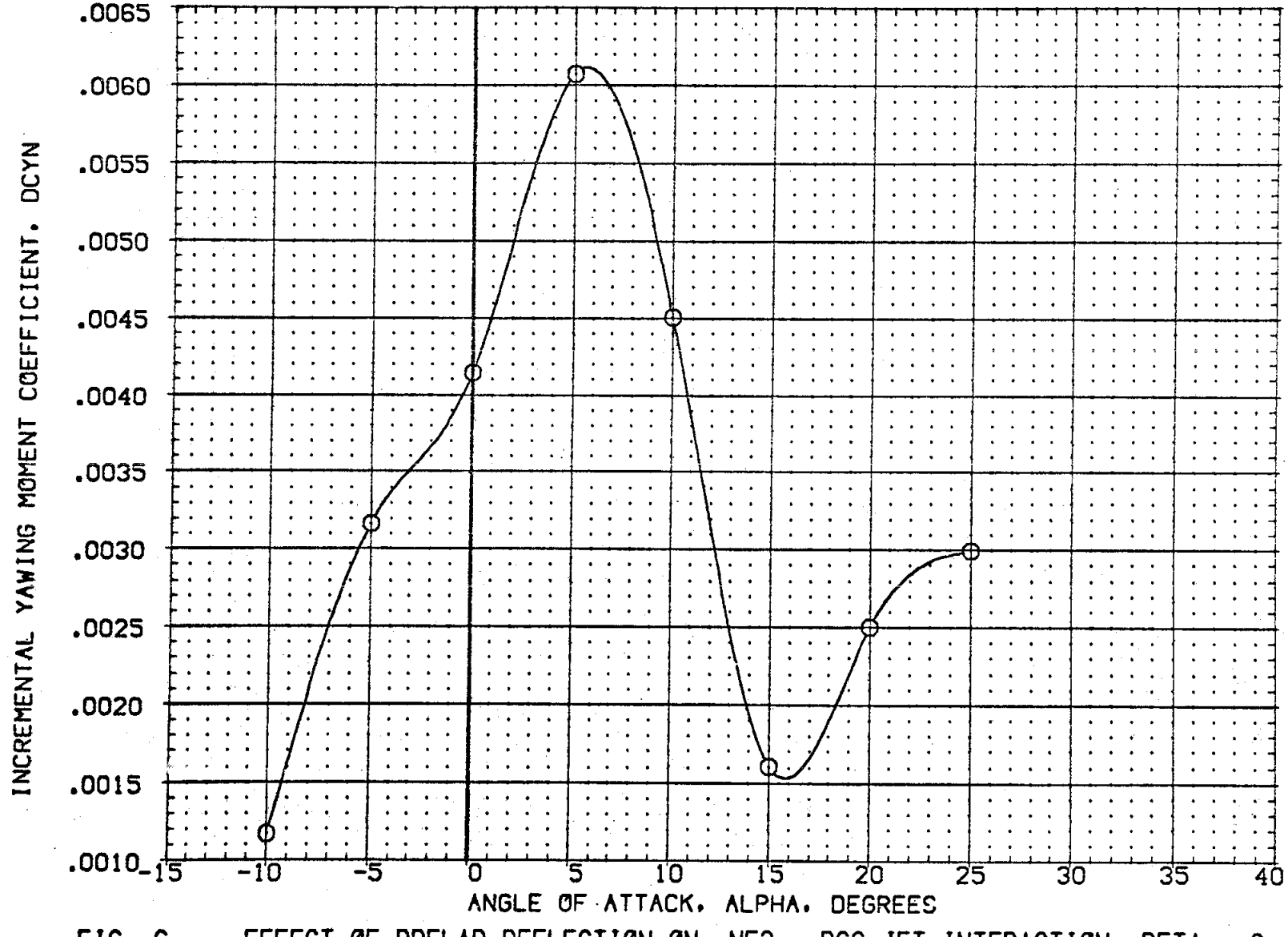


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH21ON)	○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000
(ZH20IF)	□	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

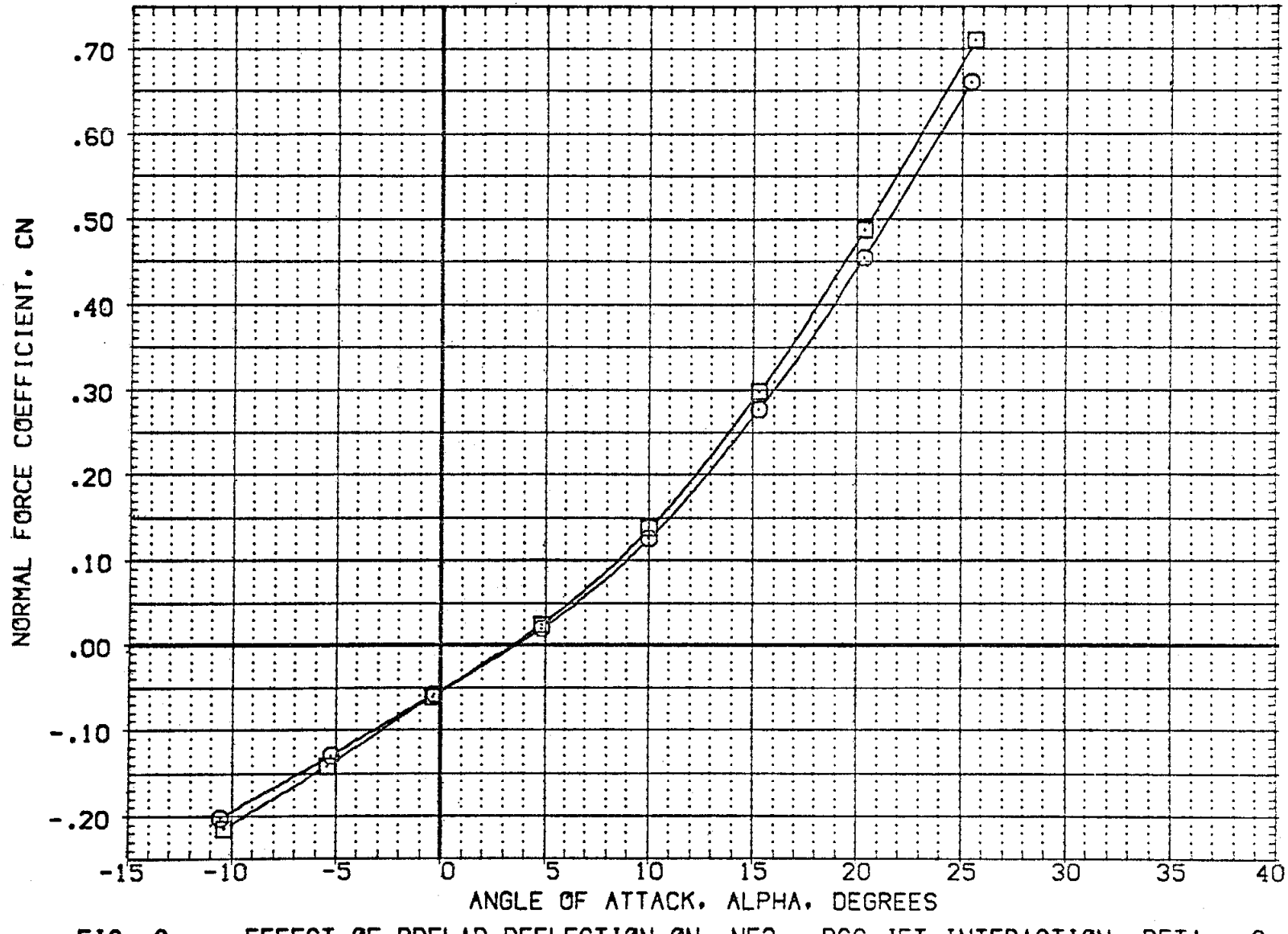


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH21ON)	○	OA105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000
(ZH20IF)	□	OA105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

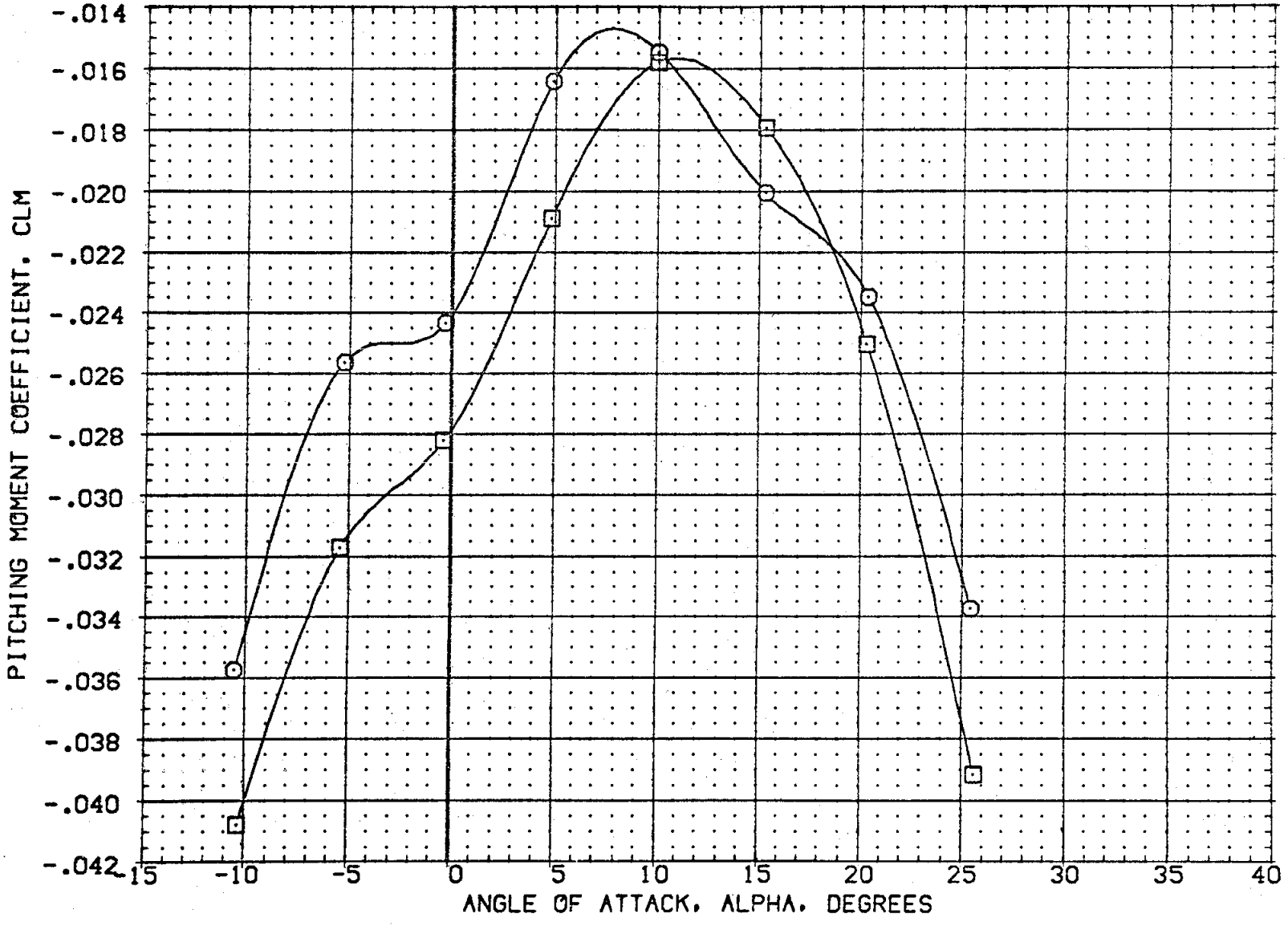


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH21ON) ○	0A105 CFHT109 MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000
(ZH20IF) □	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

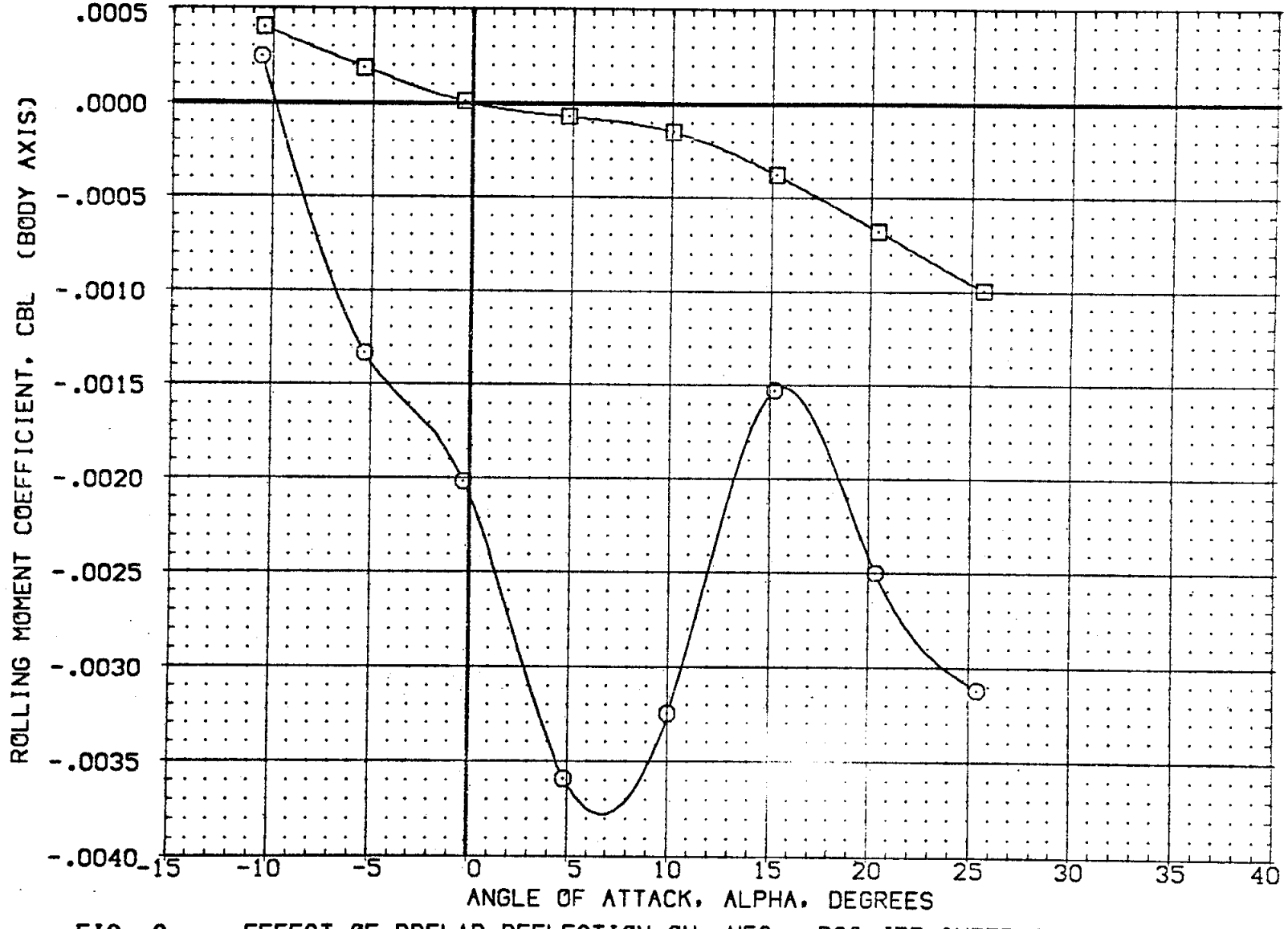


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH21ON) ○	0A105 CFHTIOS MODEL 32-0 (0)N52	PITCH UP	13.750	62.000	.000	50.000
(ZH20IF) □	0A105 CFHTIOO MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

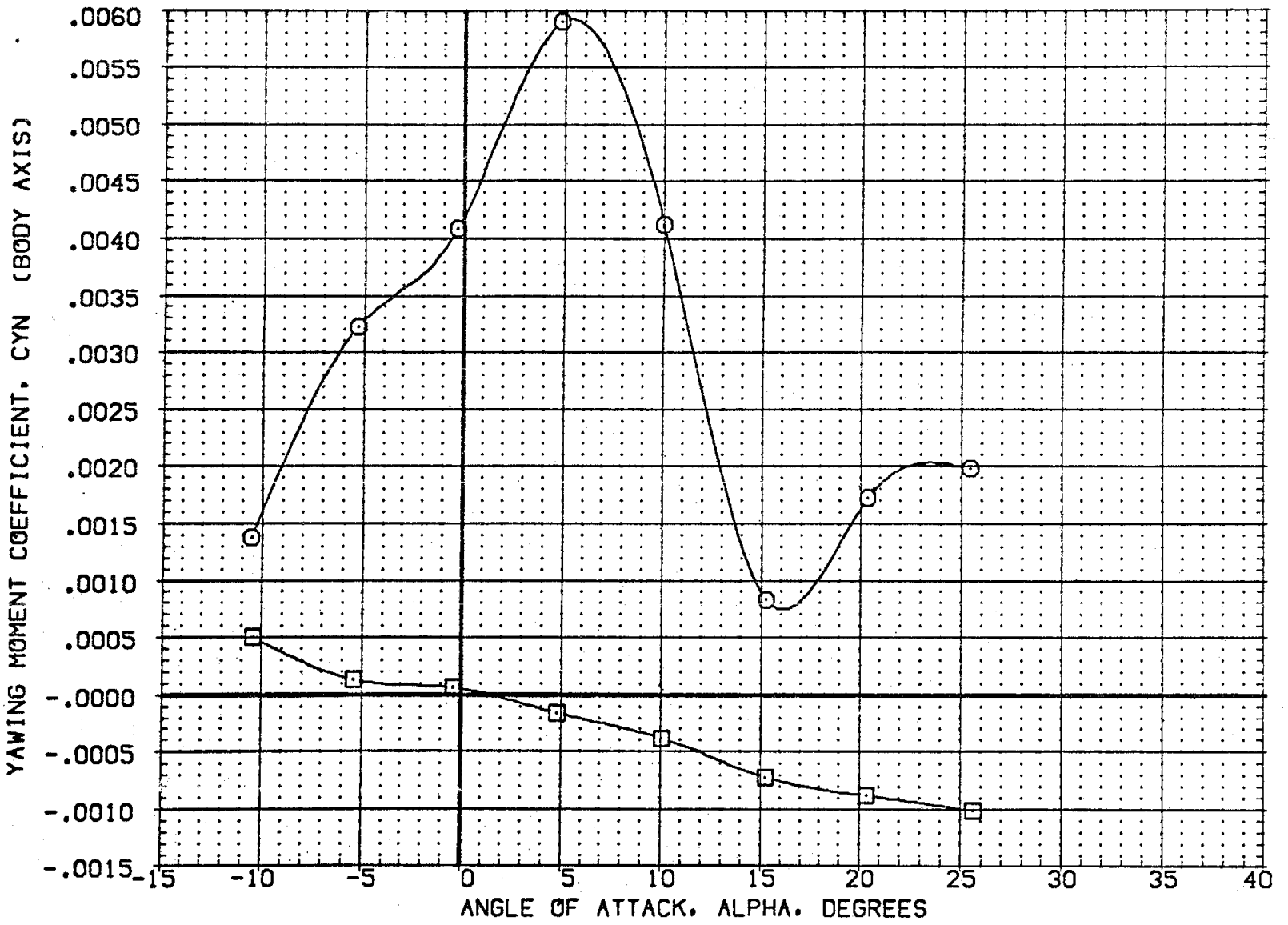


FIG 6 EFFECT OF BDFLAP DEFLECTION ON N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

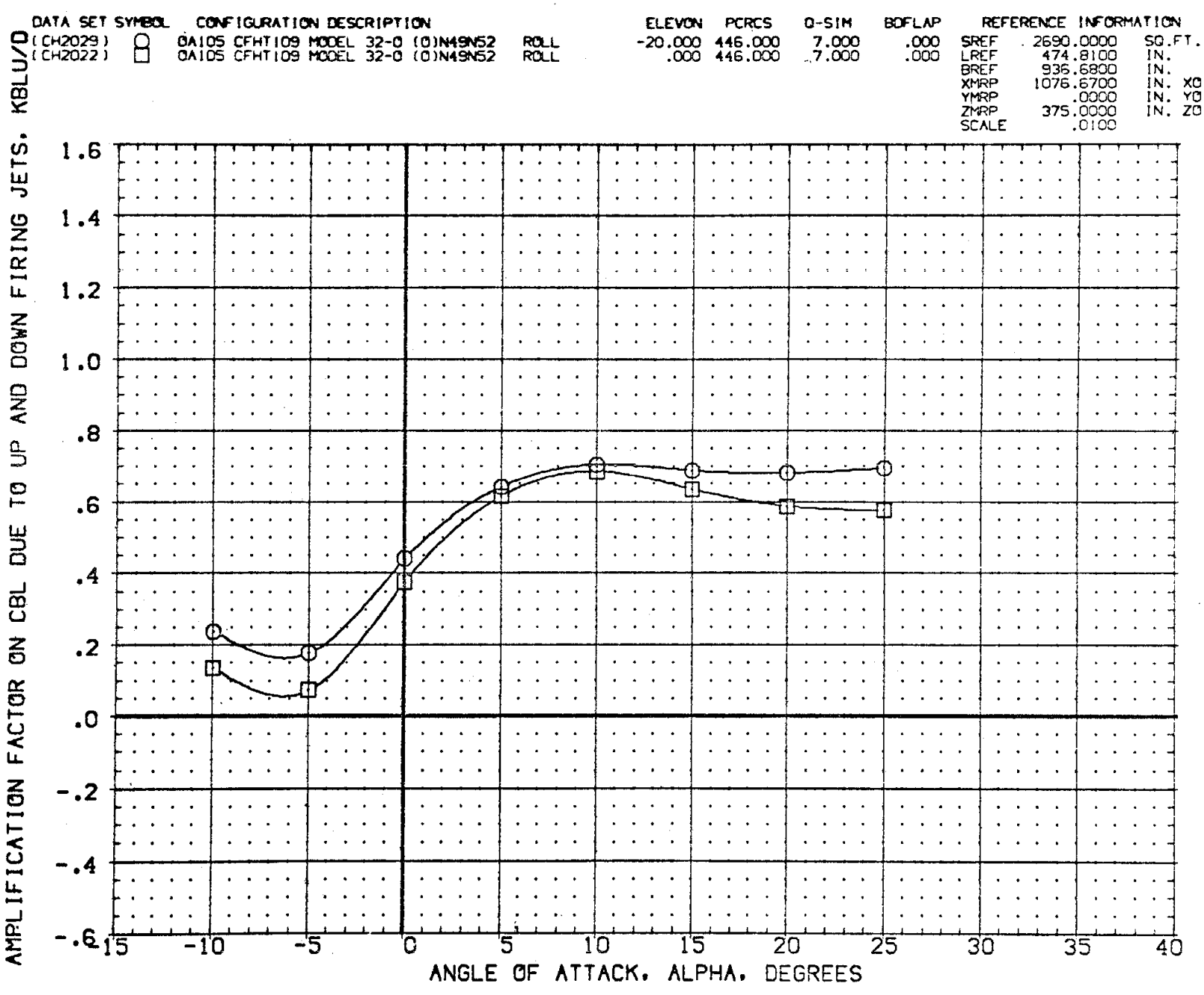


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2029)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(CH2022)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

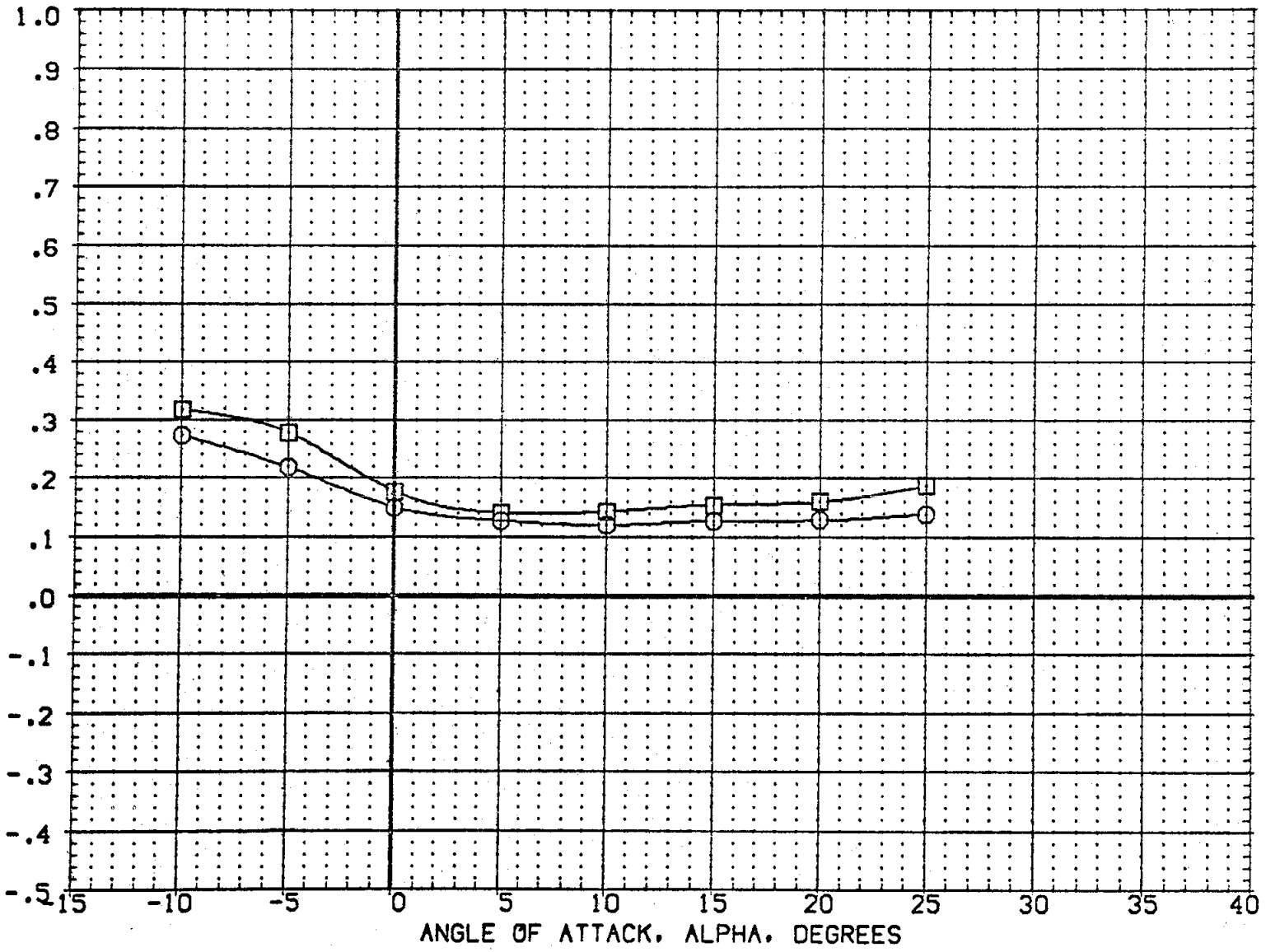


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2029) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(CH2022) □	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

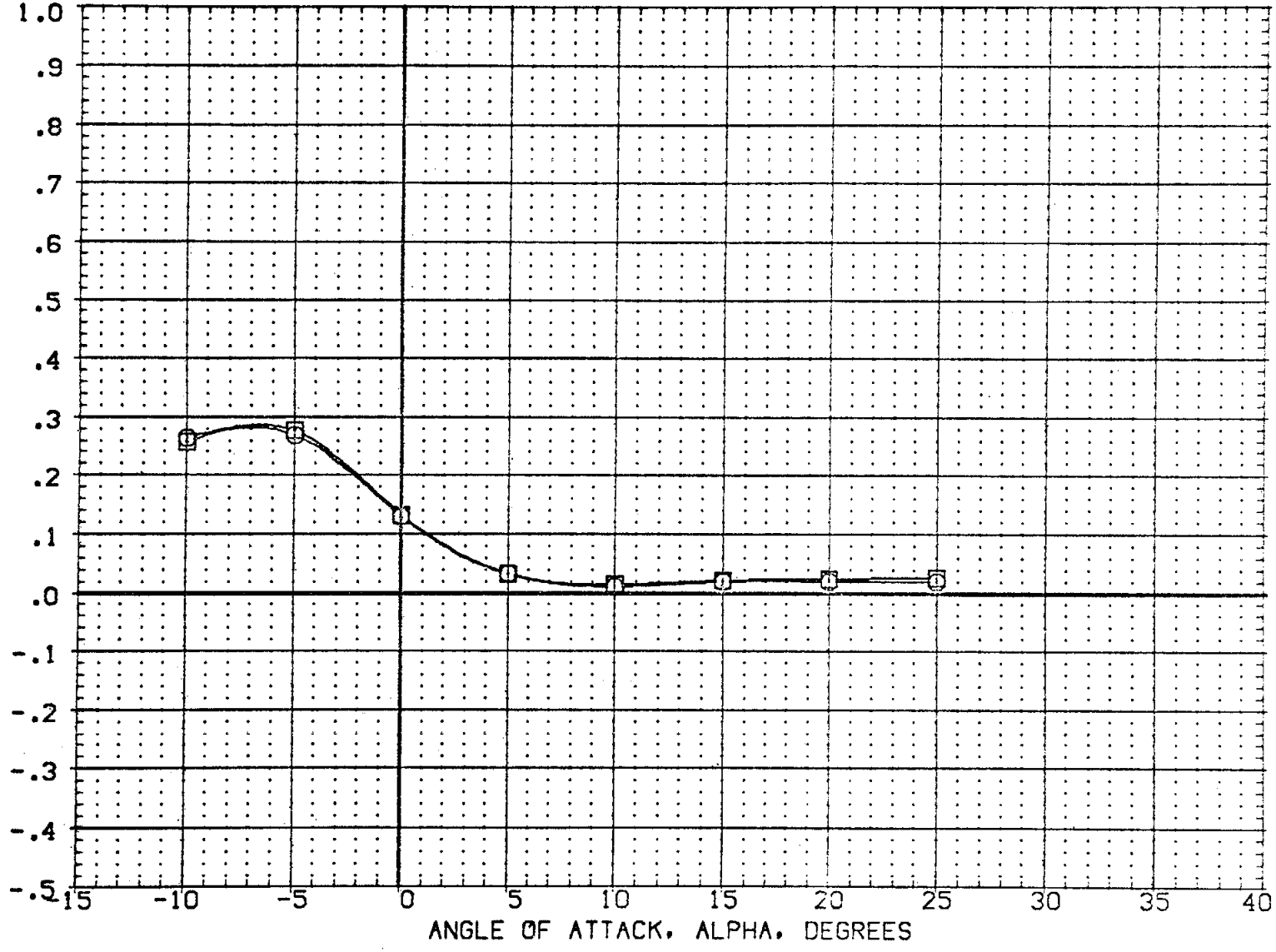


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2029) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(CH2022) □	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

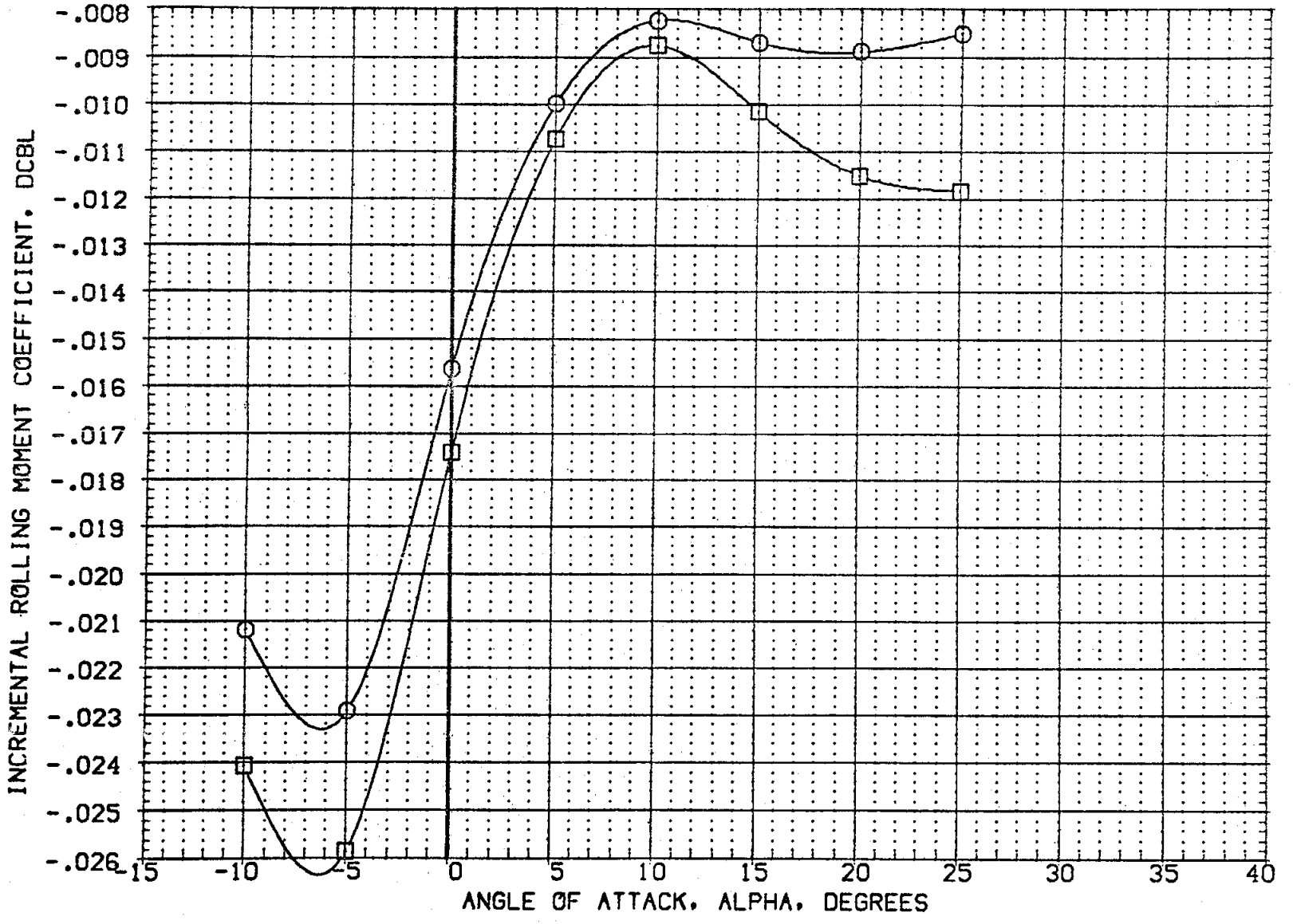


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2029)	○	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(CH2022)	□	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

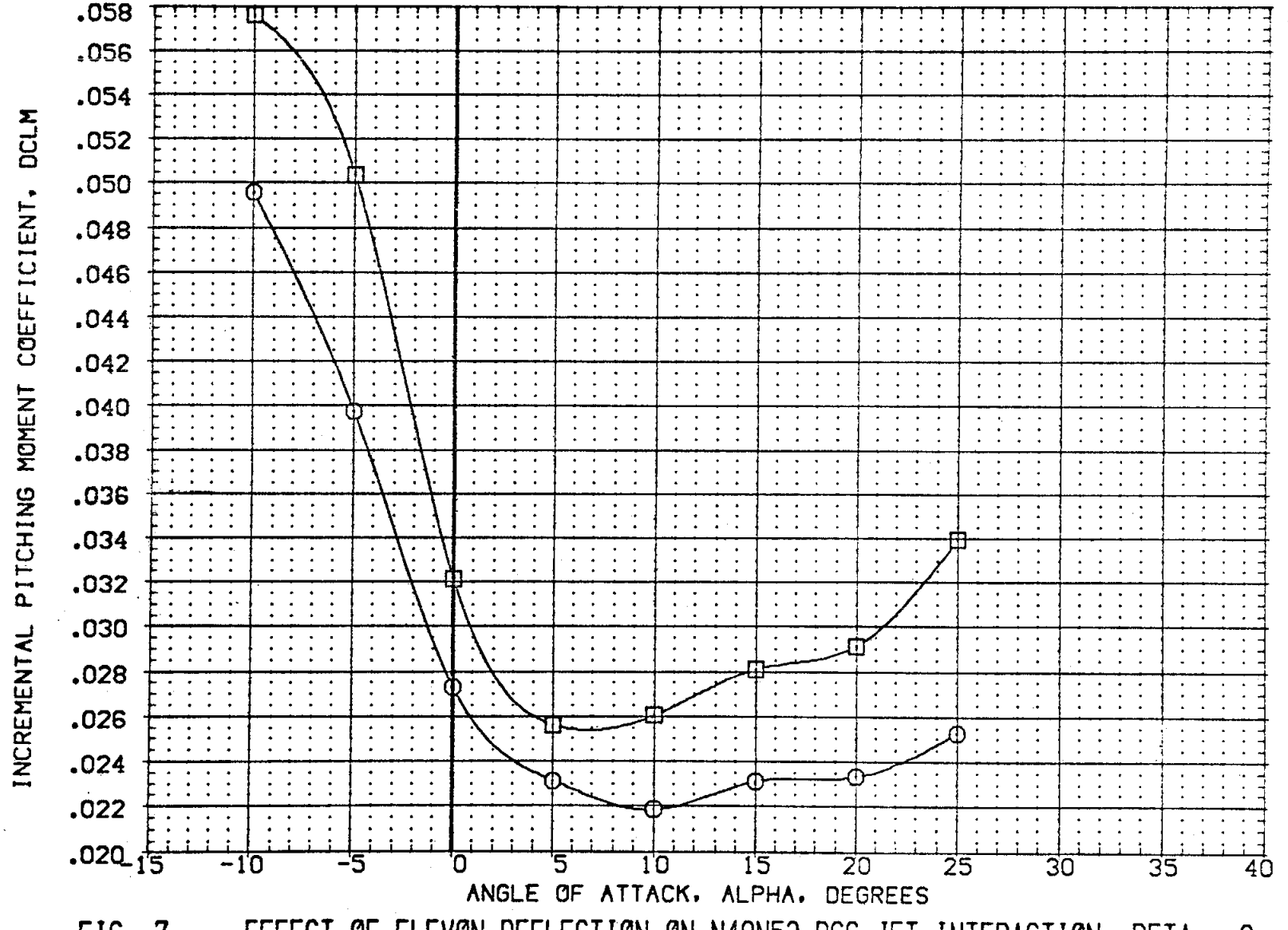


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

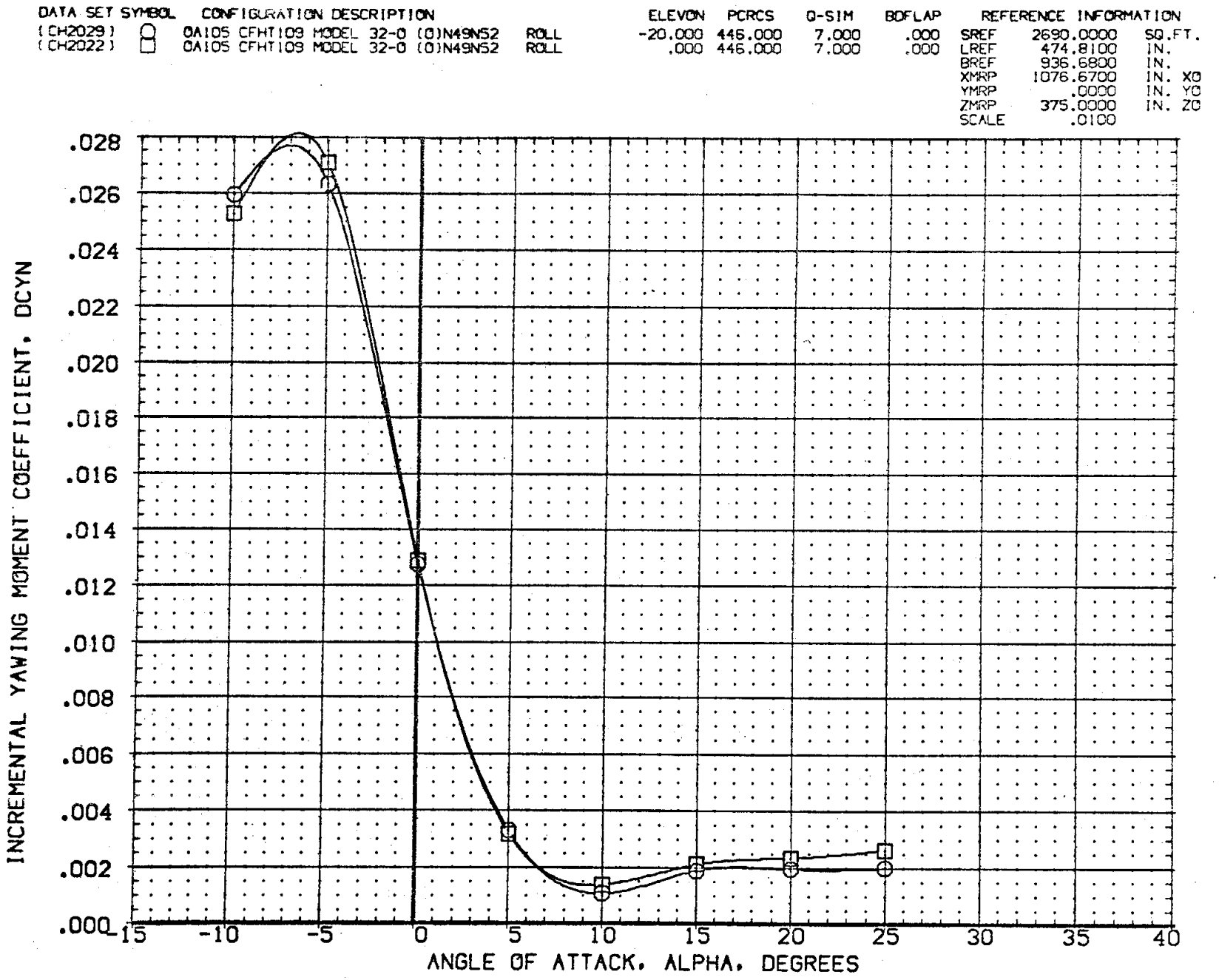


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH229N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(ZH222N)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

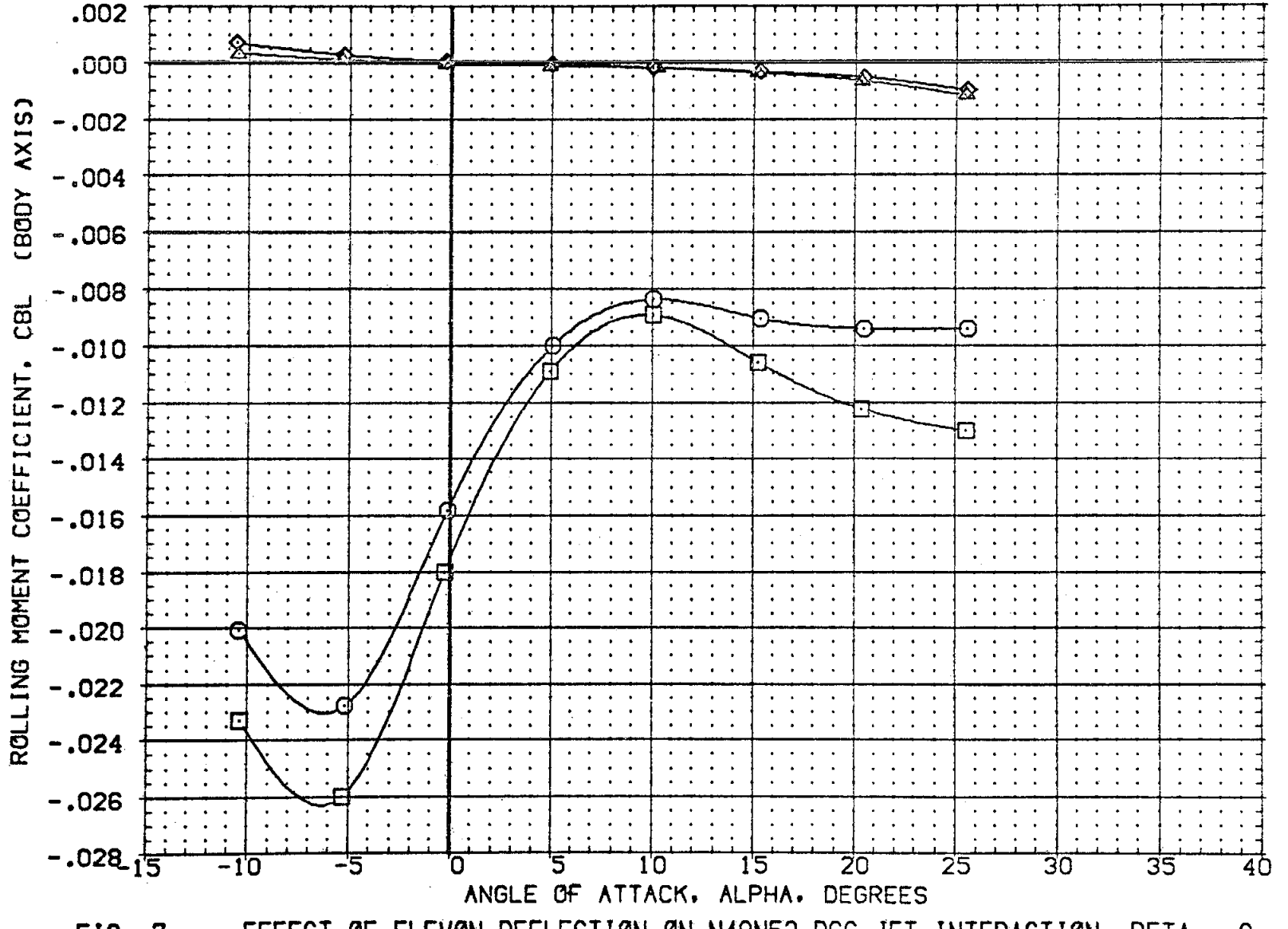


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH229N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(ZH222N)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

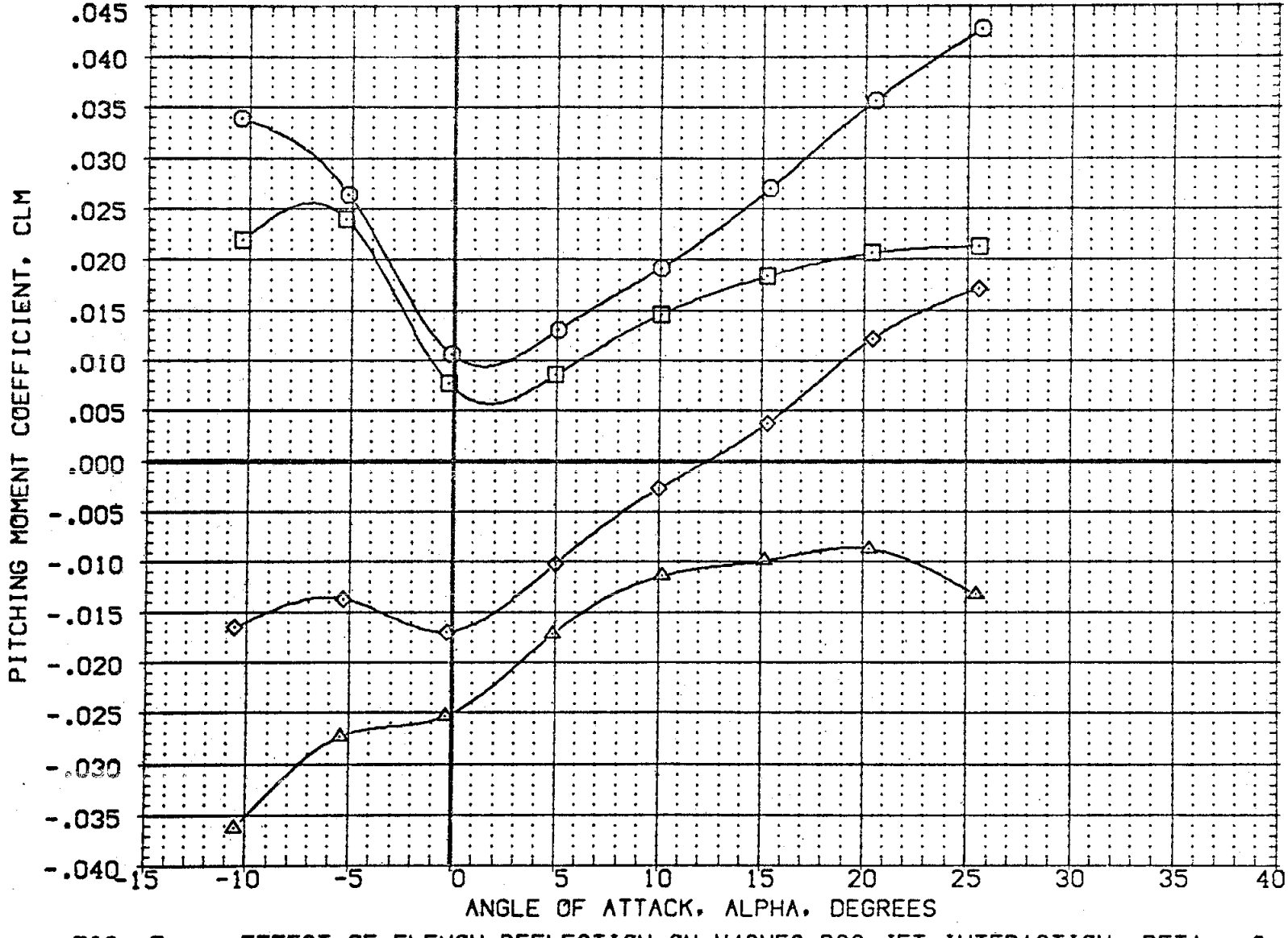


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH229N) □	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	446.000	7.000	.000
(ZH222N) □	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	7.000	.000
(ZH206F) ⊠	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F) △	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

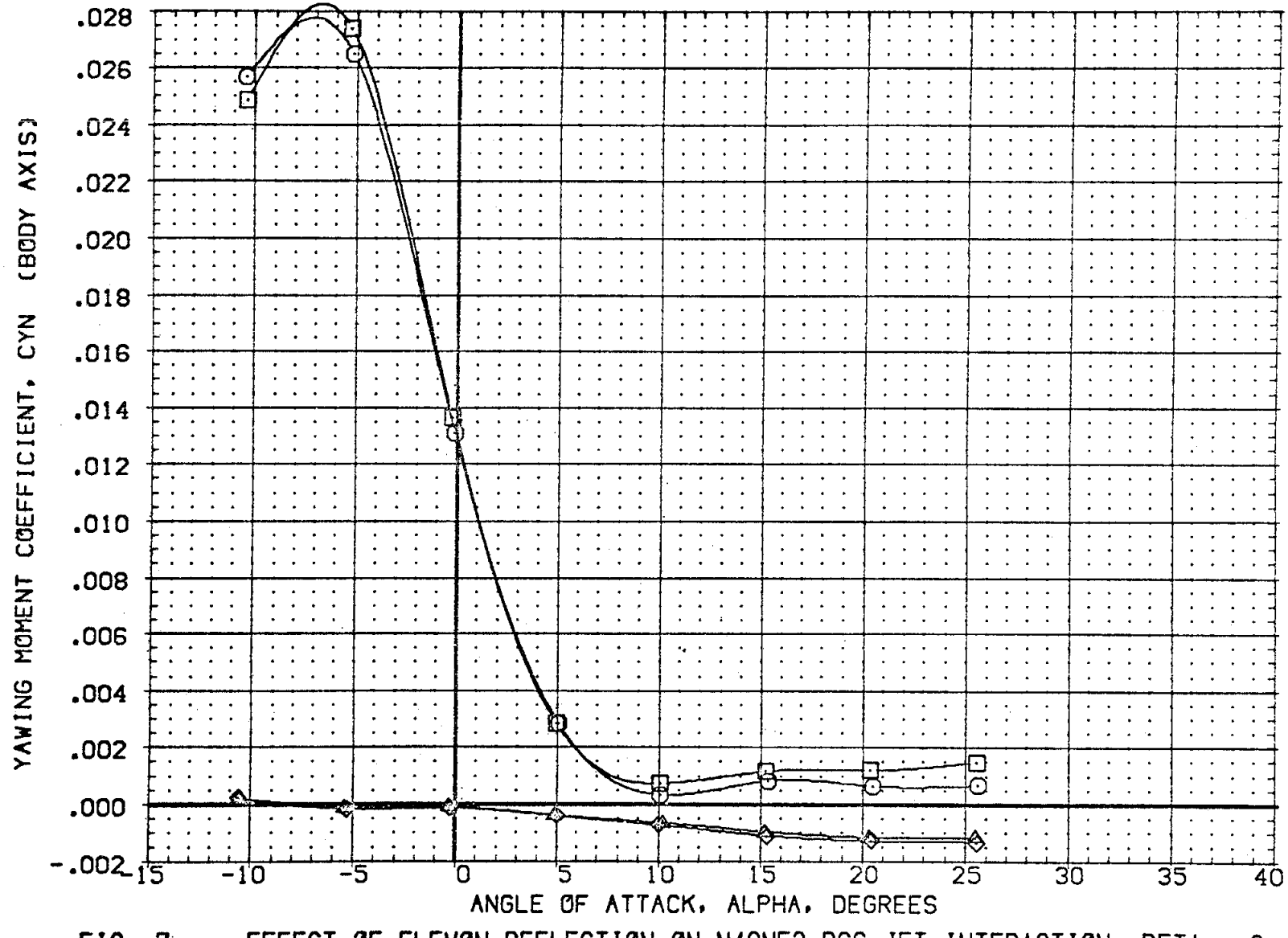


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

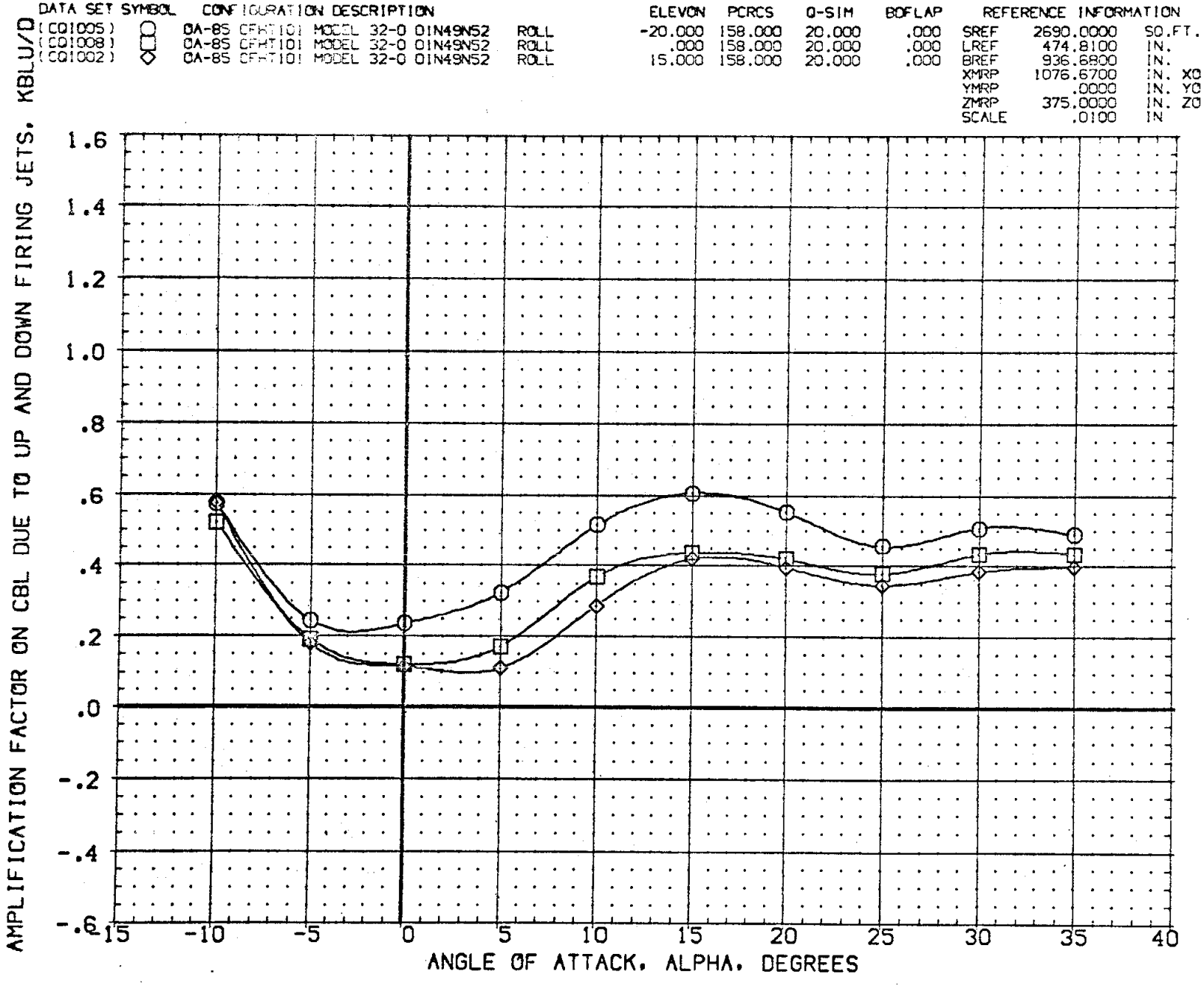


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(C01005)	○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000
(C01008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000
(C01002)	◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1005)	○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000
(CQ1002)	◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

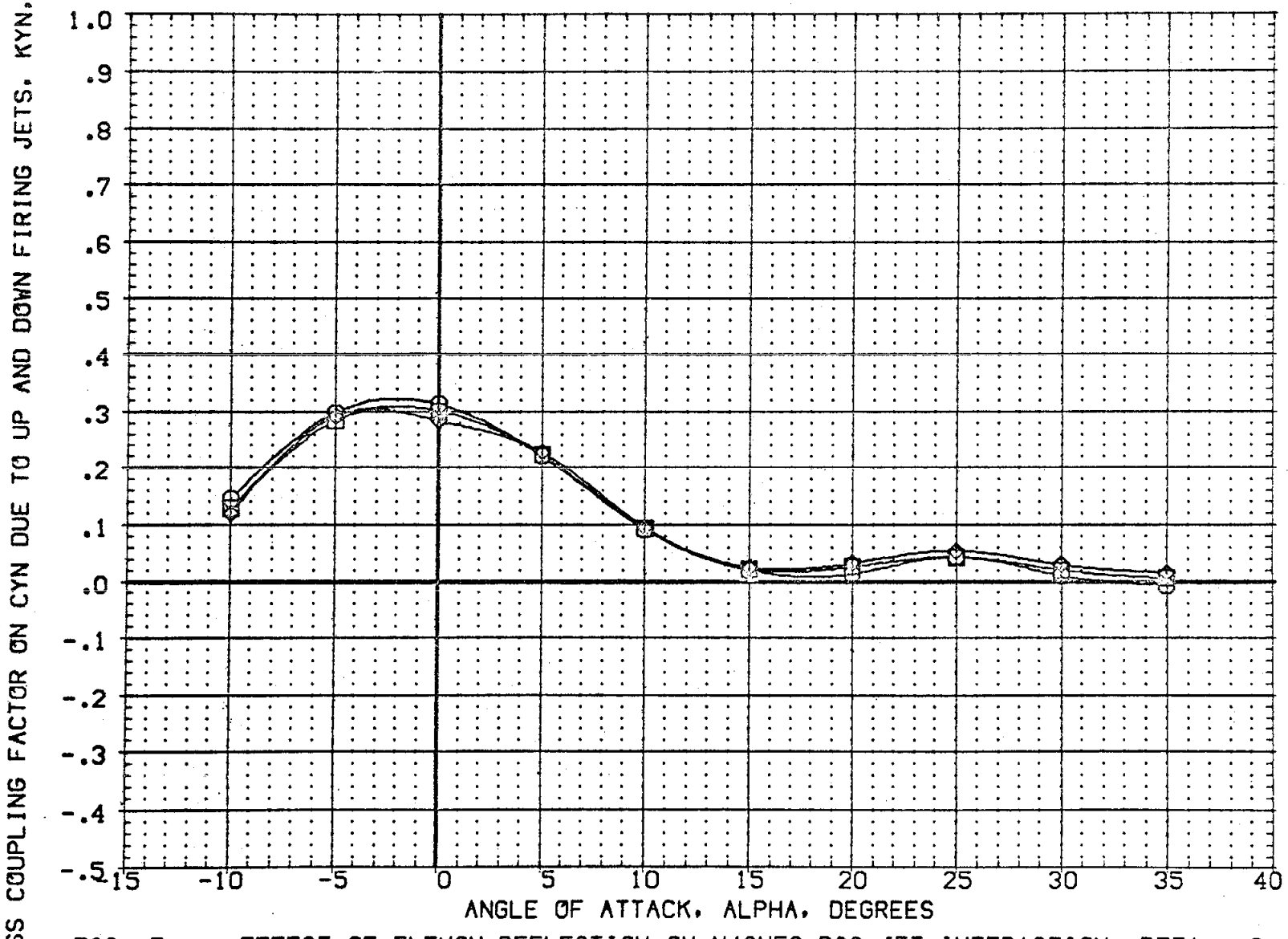


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1005) ○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000
(CQ1008) □	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000
(CQ1002) ◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	IN

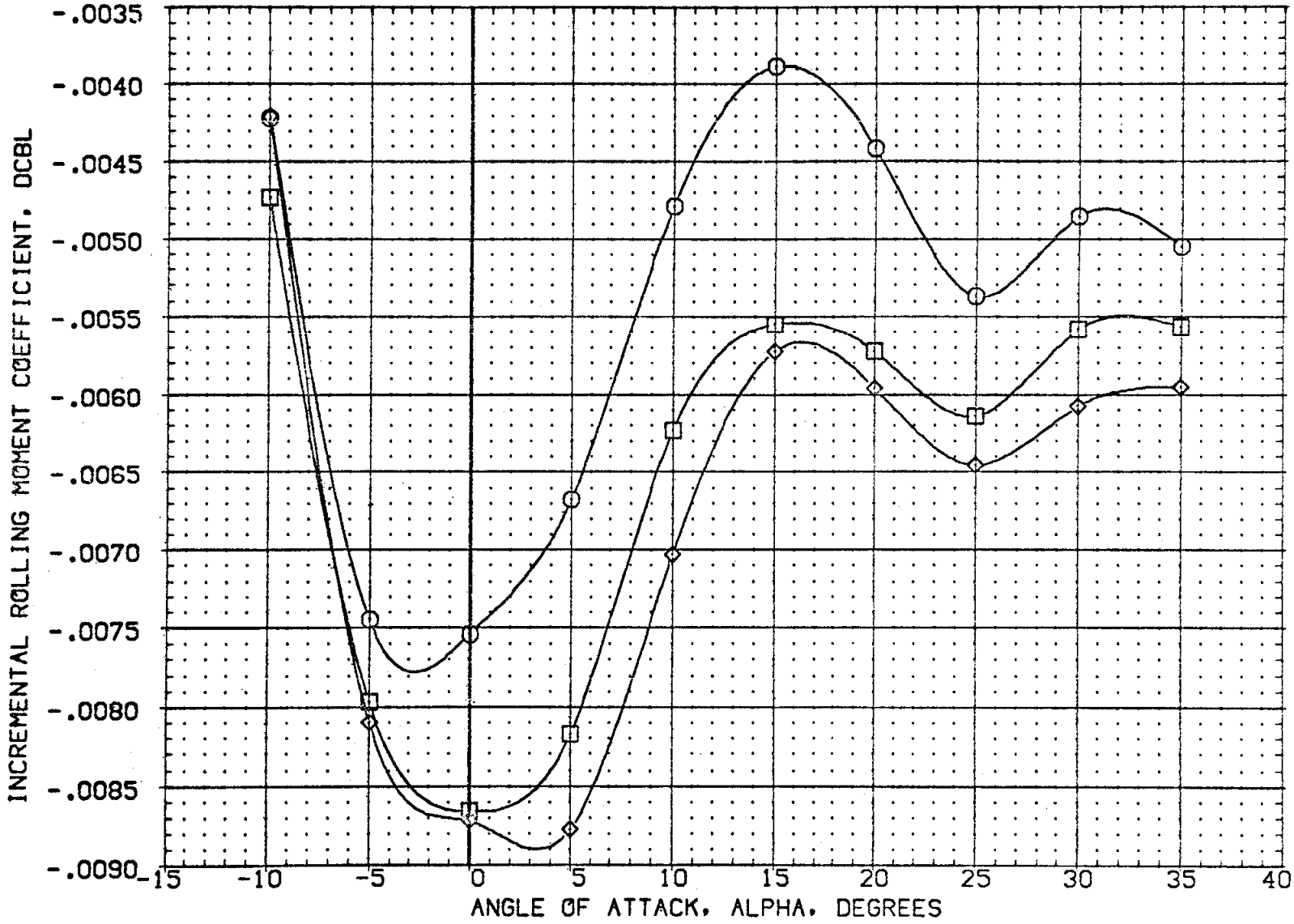


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1005) ○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000
(CQ1008) □	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000
(CQ1002) ◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

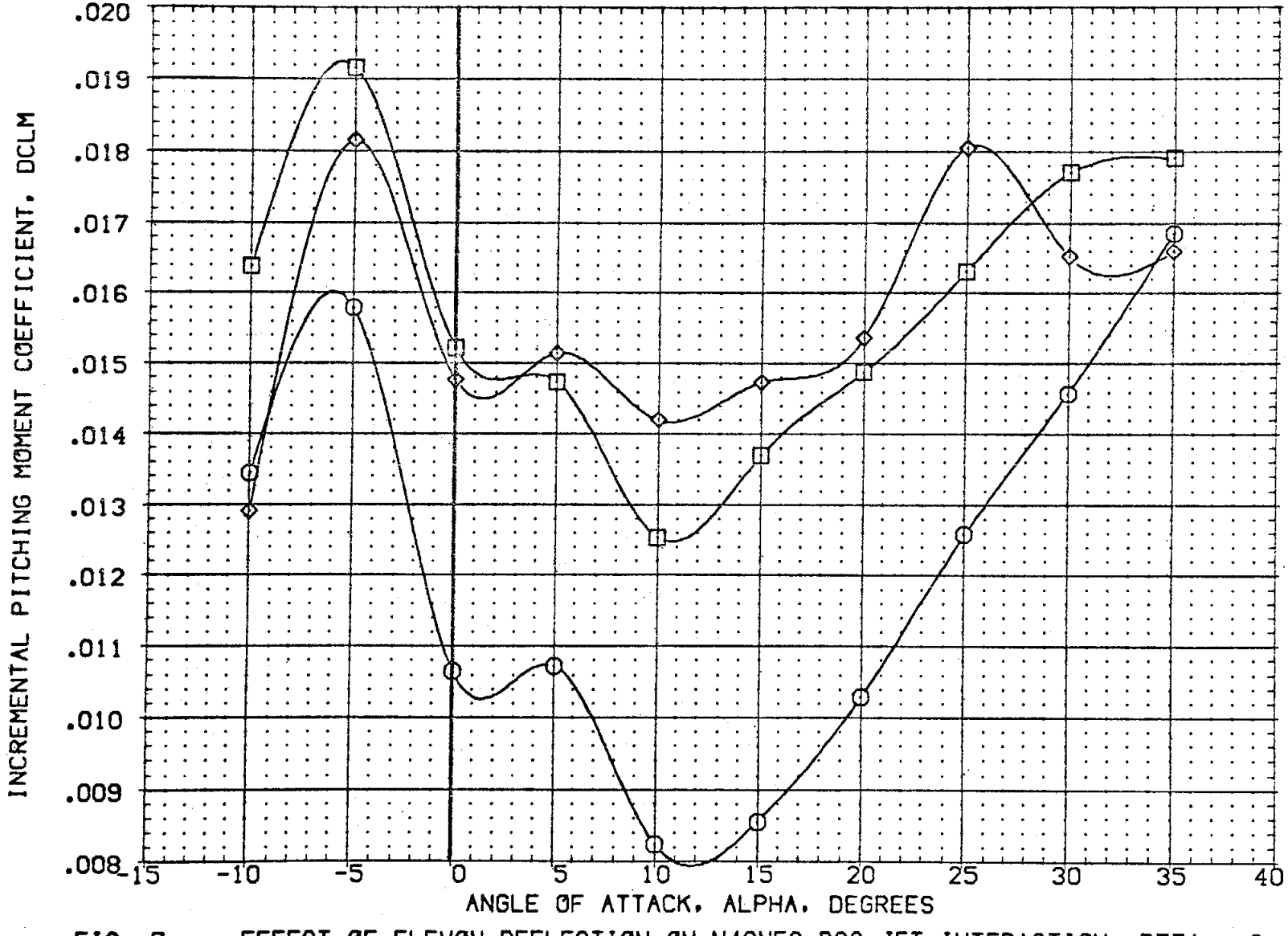


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1005)	○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000
(CQ1002)	◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

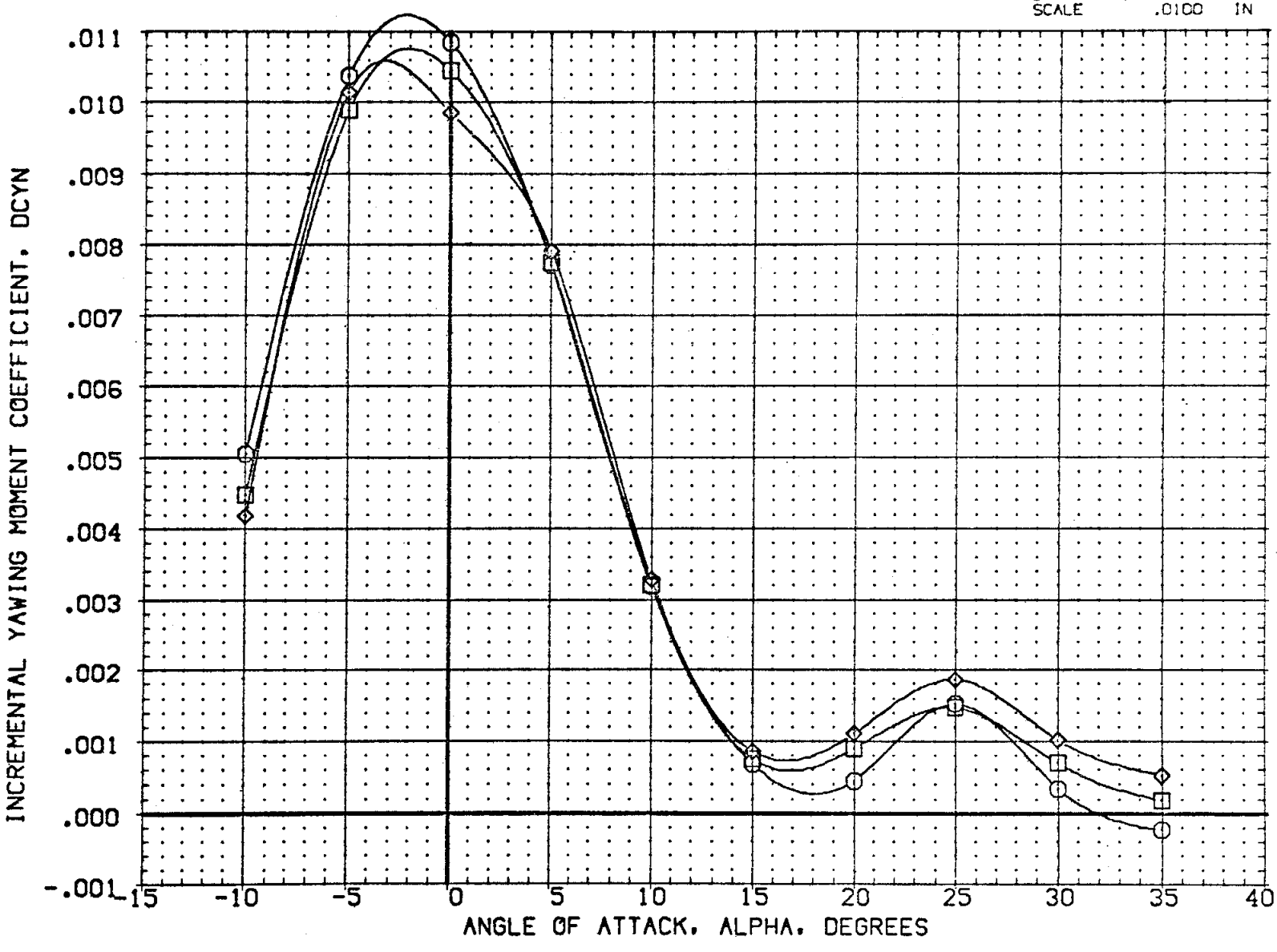


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

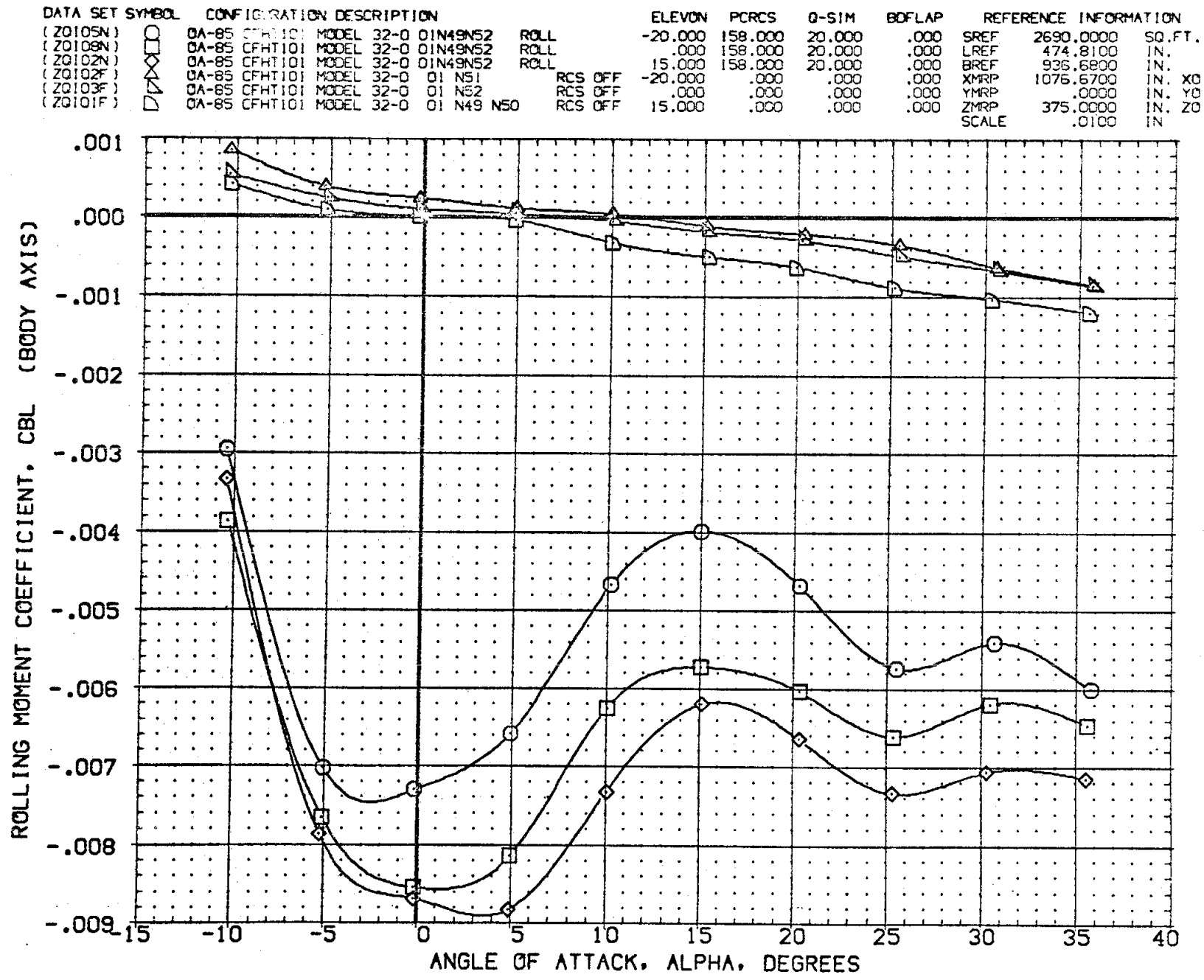


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	O-SIM	BDFLAP	REFERENCE INFORMATION		
(ZQ105N)	○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000	SREF	2690.0000	SQ.FT.
(ZQ108N)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000	LREF	474.8100	IN.
(ZQ102N)	◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000	BREF	936.6800	IN.
(ZQ102F)	△	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000	XMRP	1076.6700	IN. XO
(ZQ103F)	▽	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000	YMRP	.0000	IN. YO
(ZQ101F)	▷	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000	ZMRP	375.0000	IN. ZO
								SCALE	.0100	IN

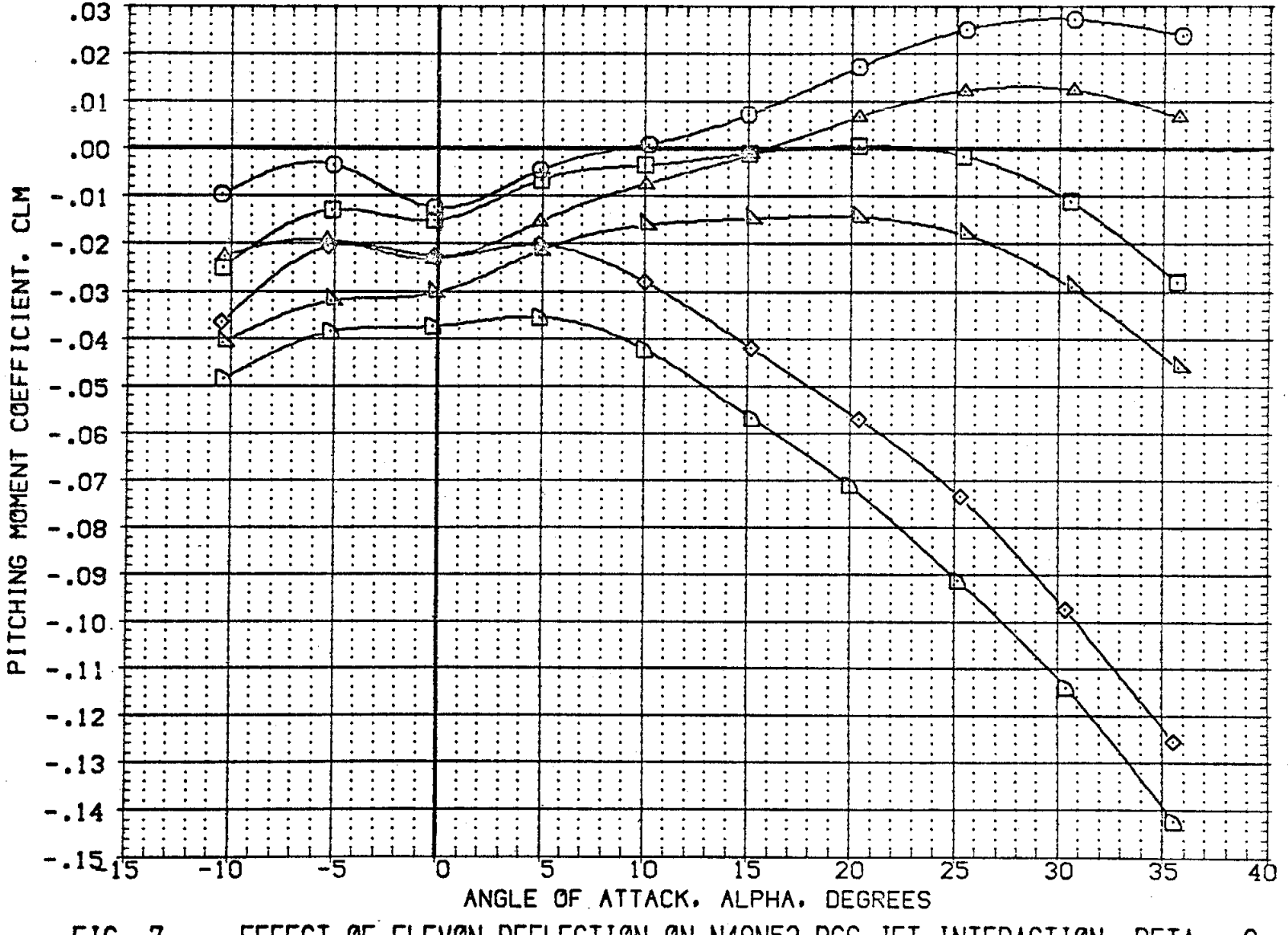


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP	REFERENCE INFORMATION		
(ZQ10SN)	○	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	-20.000	158.000	20.000	.000	SREF	2690.0000	SQ.FT.
(ZQ10SN)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	20.000	.000	LREF	474.8100	IN.
(ZQ10ZN)	◇	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	15.000	158.000	20.000	.000	BREF	936.6800	IN.
(ZQ10ZF)	△	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000	XMRP	1076.6700	IN. XC
(ZQ10ZF)	▽	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000	YMRP	.0000	IN. YC
(ZQ10IF)	⬠	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000	ZMRP	375.0000	IN. ZC
								SCALE	.0100	IN

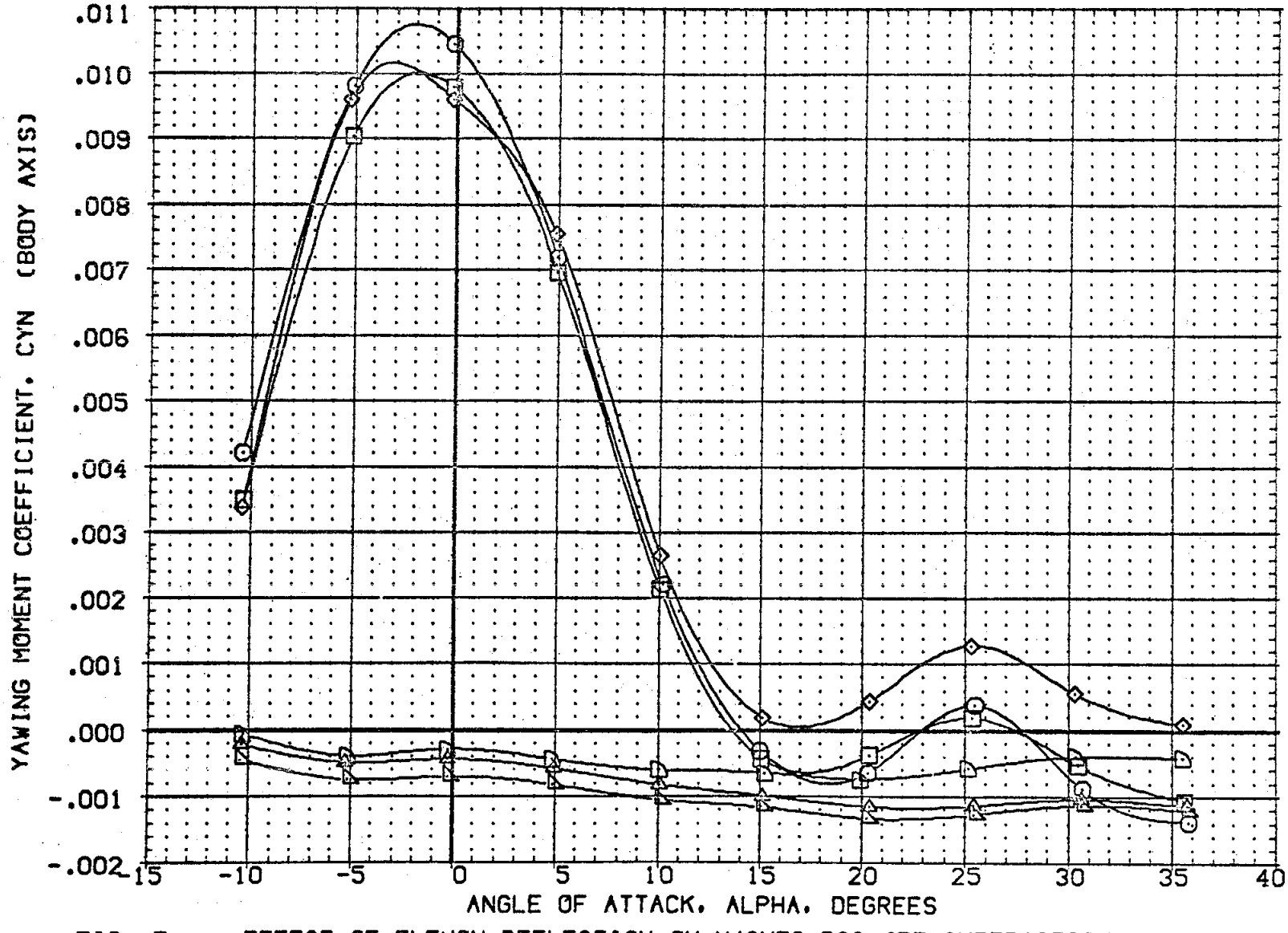


FIG 7 EFFECT OF ELEVON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BOFLAP
(CH2032)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

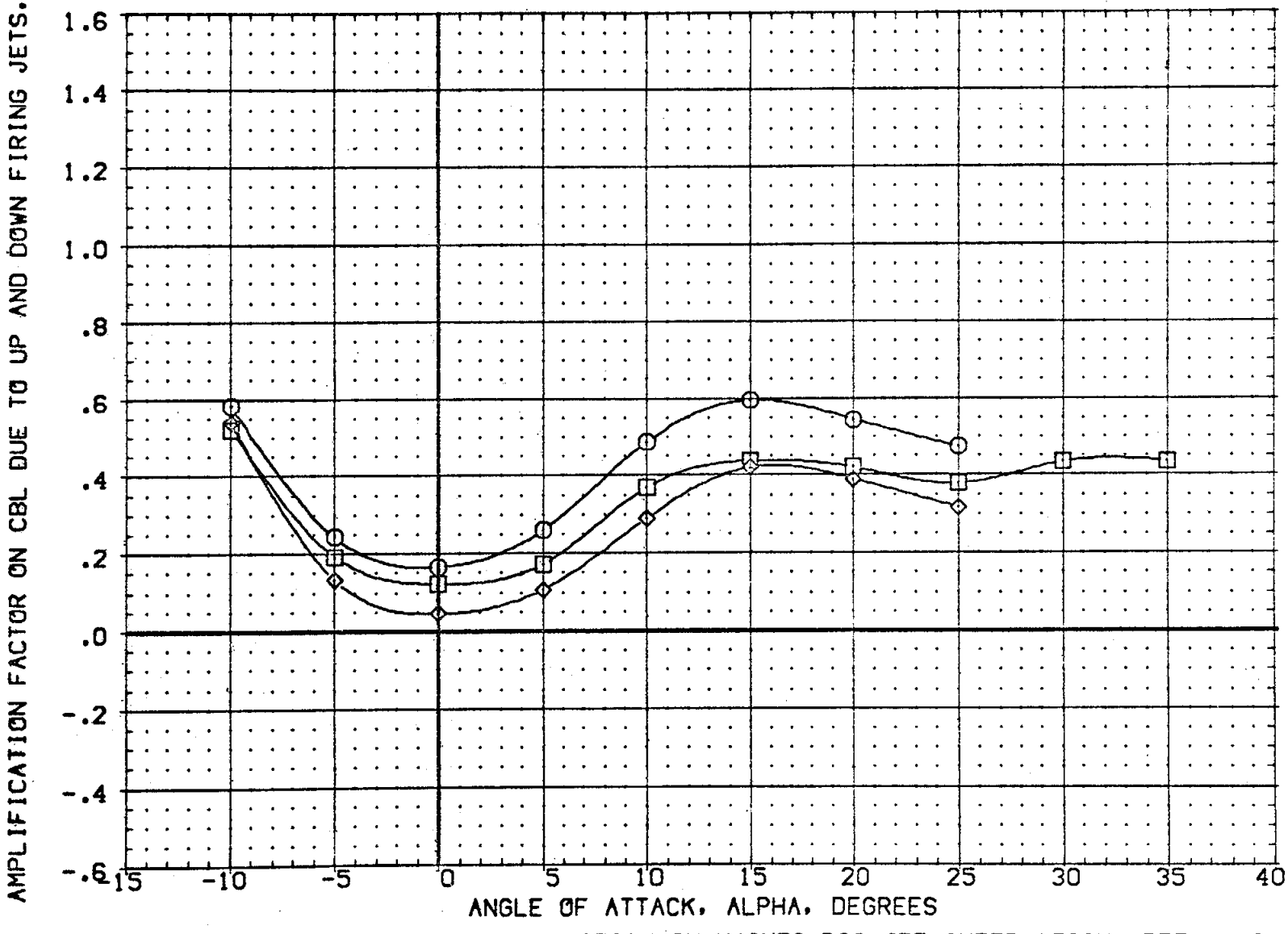


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BDFLAP
(CH2032)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

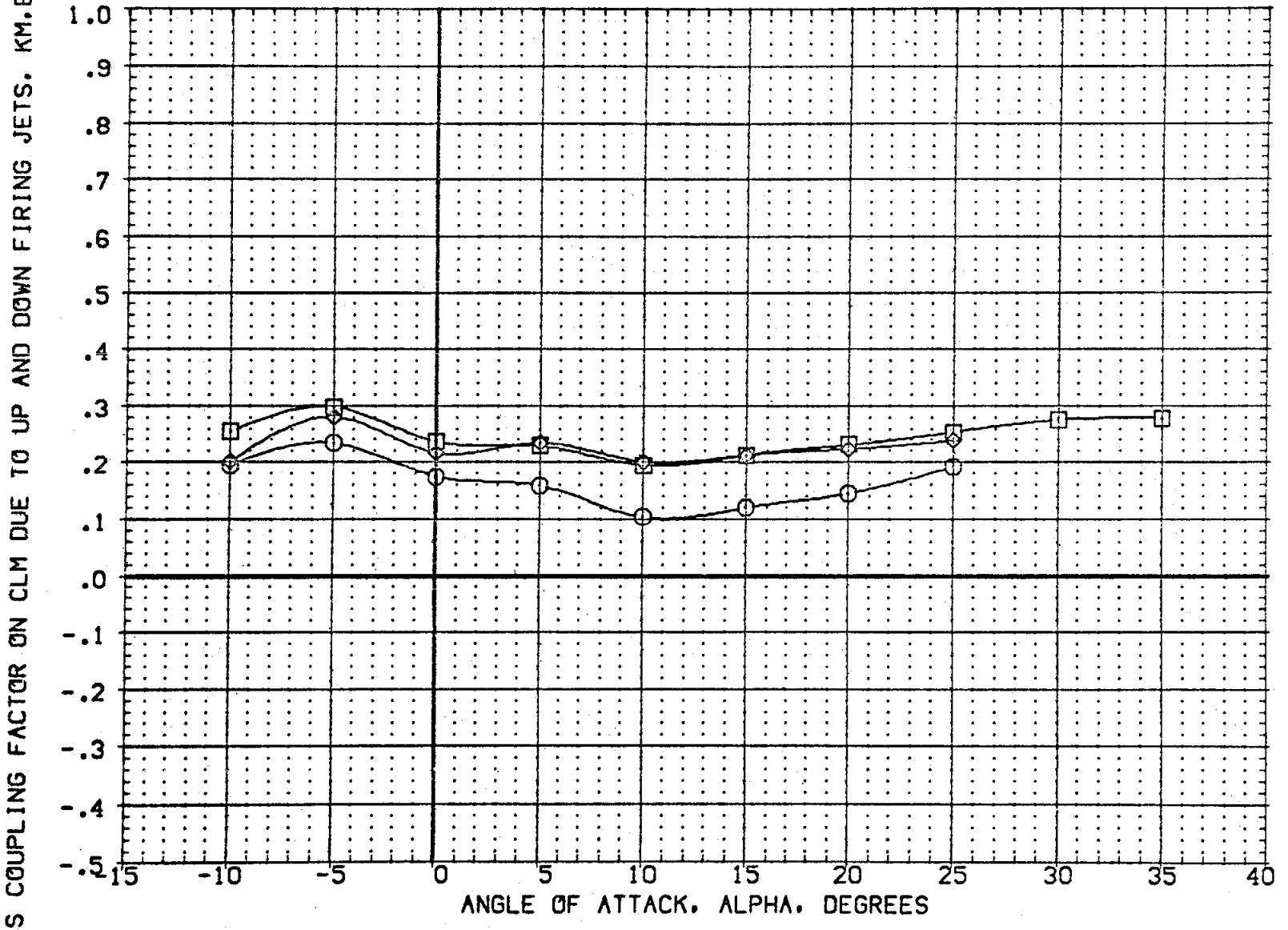


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BOFLAP
(CH2032)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(C01008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

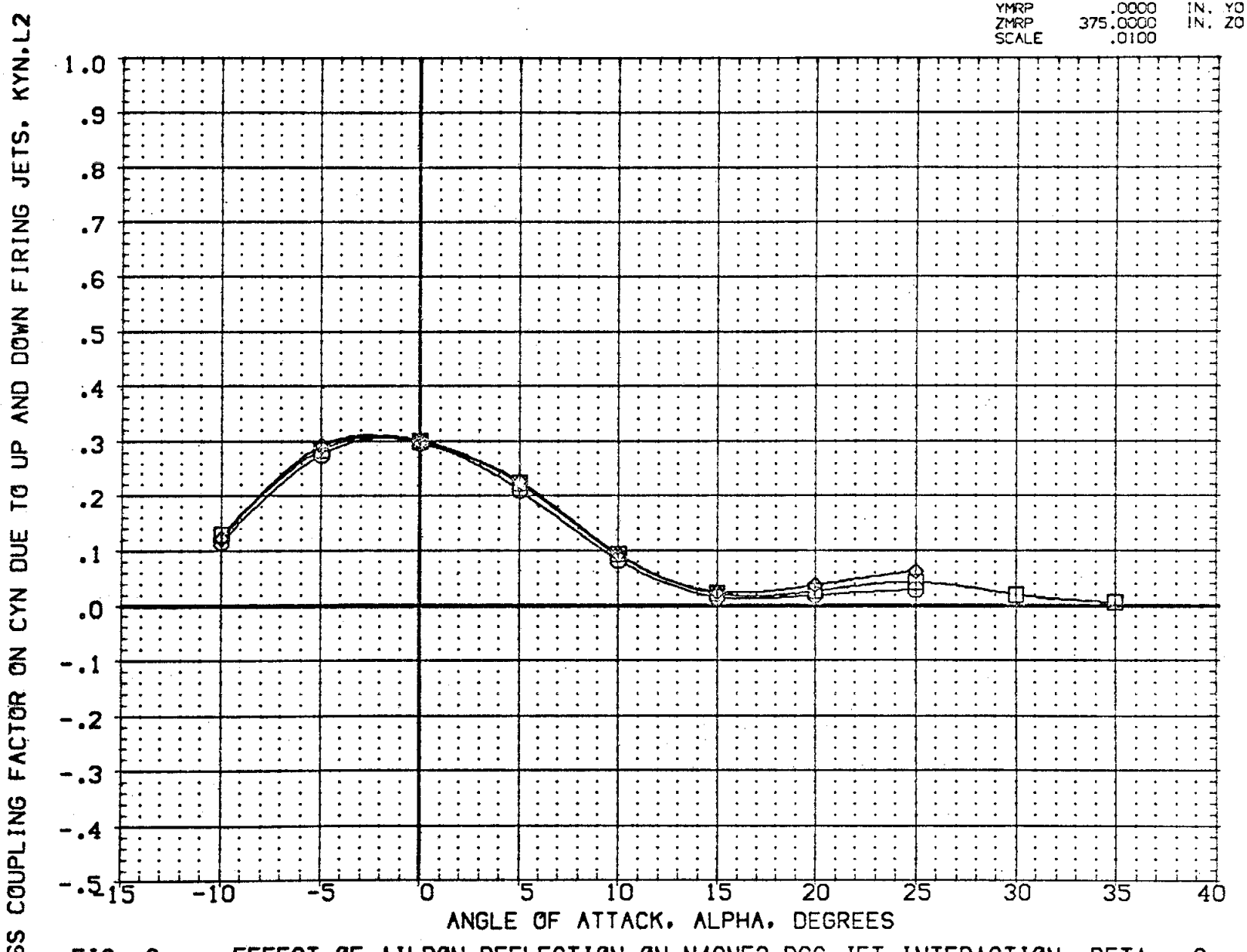


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BDFLAP
(CH2032)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 0)N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

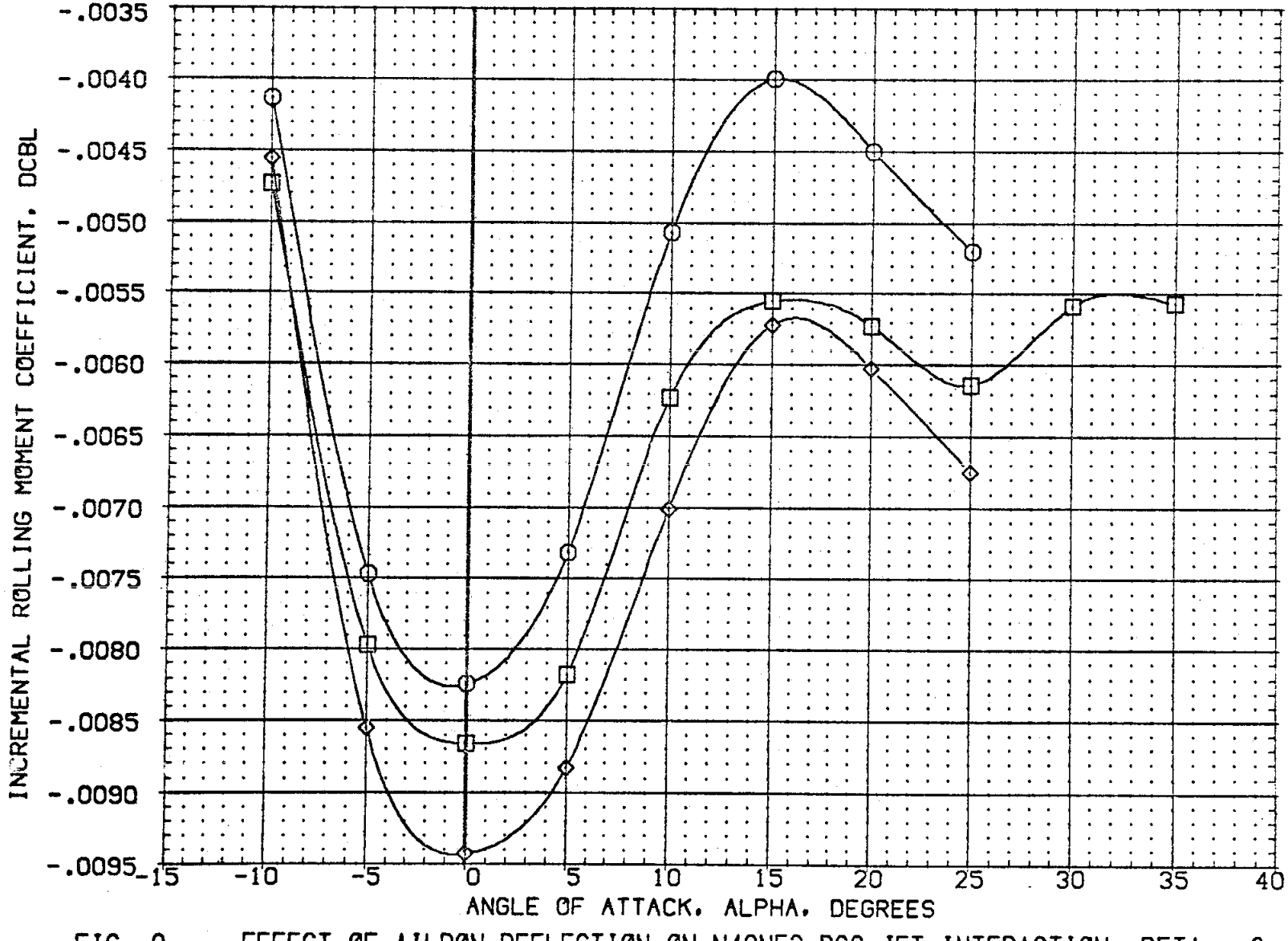


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BOFLAP
(CH2032)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

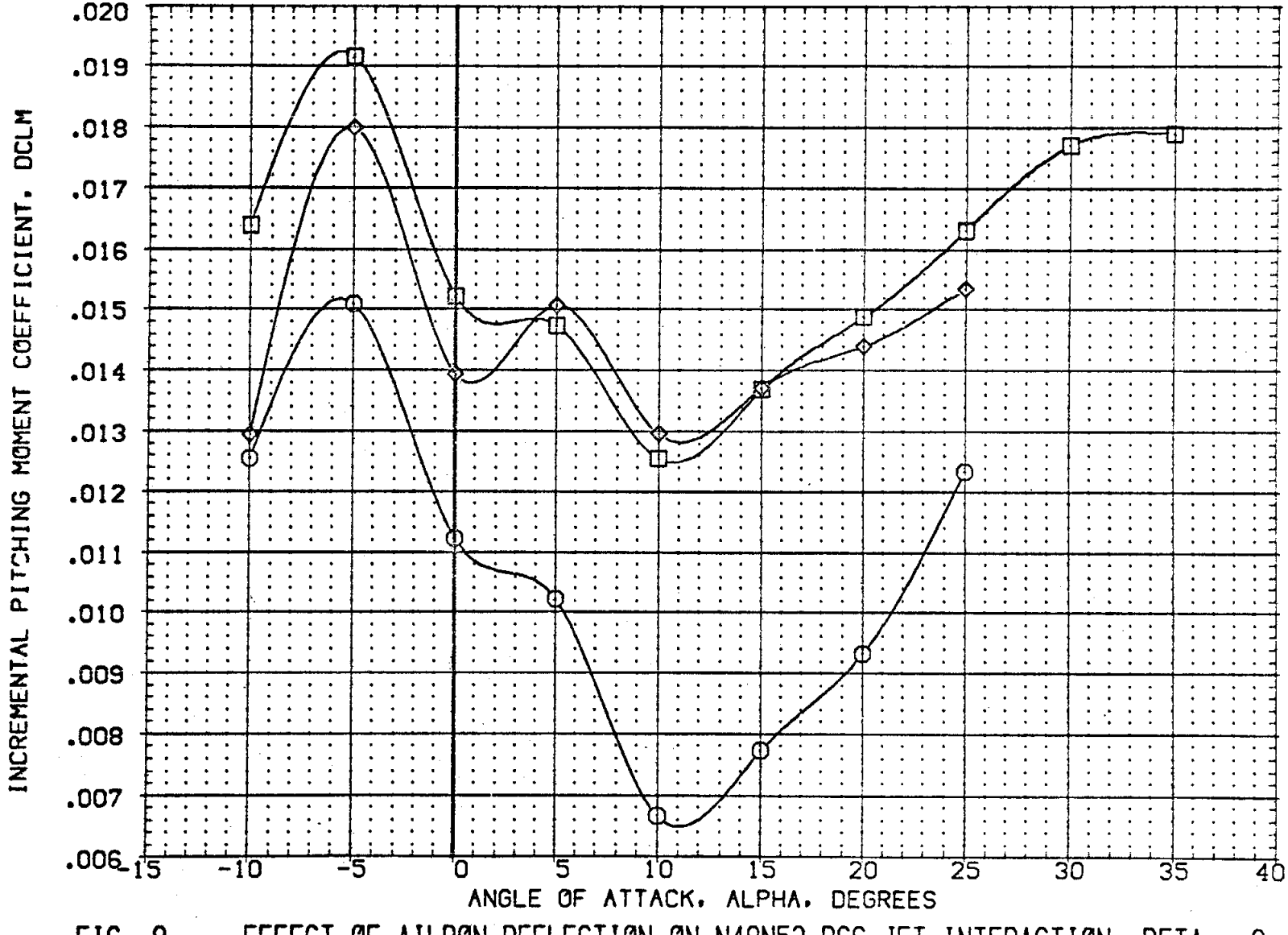


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BOFLAP
(CH2032)	○	0A10E CF[illegible]109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(C01008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000
(CH2031)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

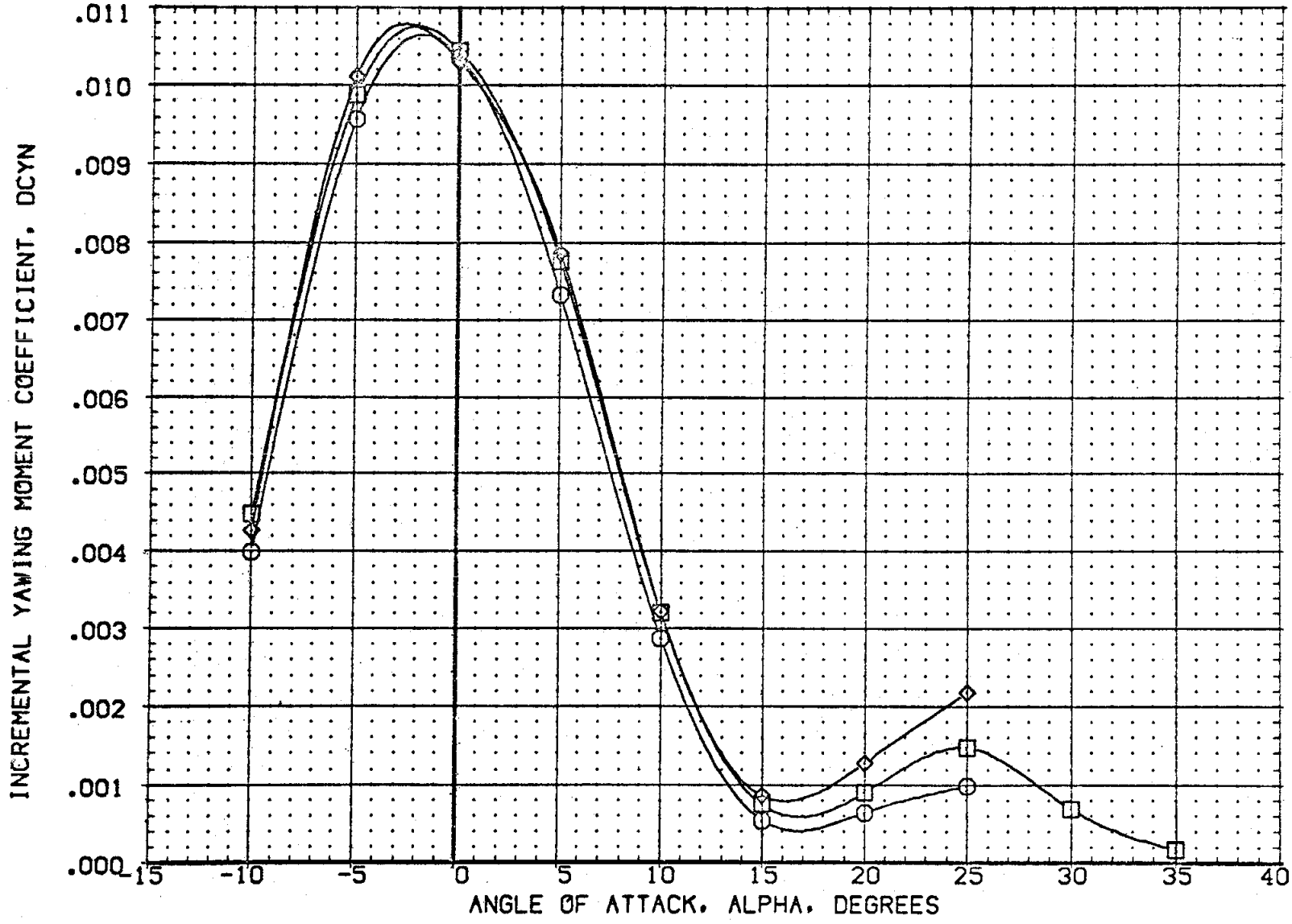


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BOFLAP	REFERENCE INFORMATION		
(ZH232N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000	SREF	2690.0000	SQ.FT.
(ZQ108N)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000	LREF	474.8100	IN.
(ZH231N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000	BREF	936.6800	IN.
(ZH208F)	△	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-15.000	.000	.000	.000	XMRP	1076.6700	IN. XO
(ZQ103F)	▷	0A-85 CFHT101 MODEL 32-0 01 NS2	RCS OFF		.000	.000	.000	YMRP	.0000	IN. YO
(ZH207F)	▷	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	15.000	.000	.000	.000	ZMRP	375.0000	IN. ZO
								SCALE	.0100	

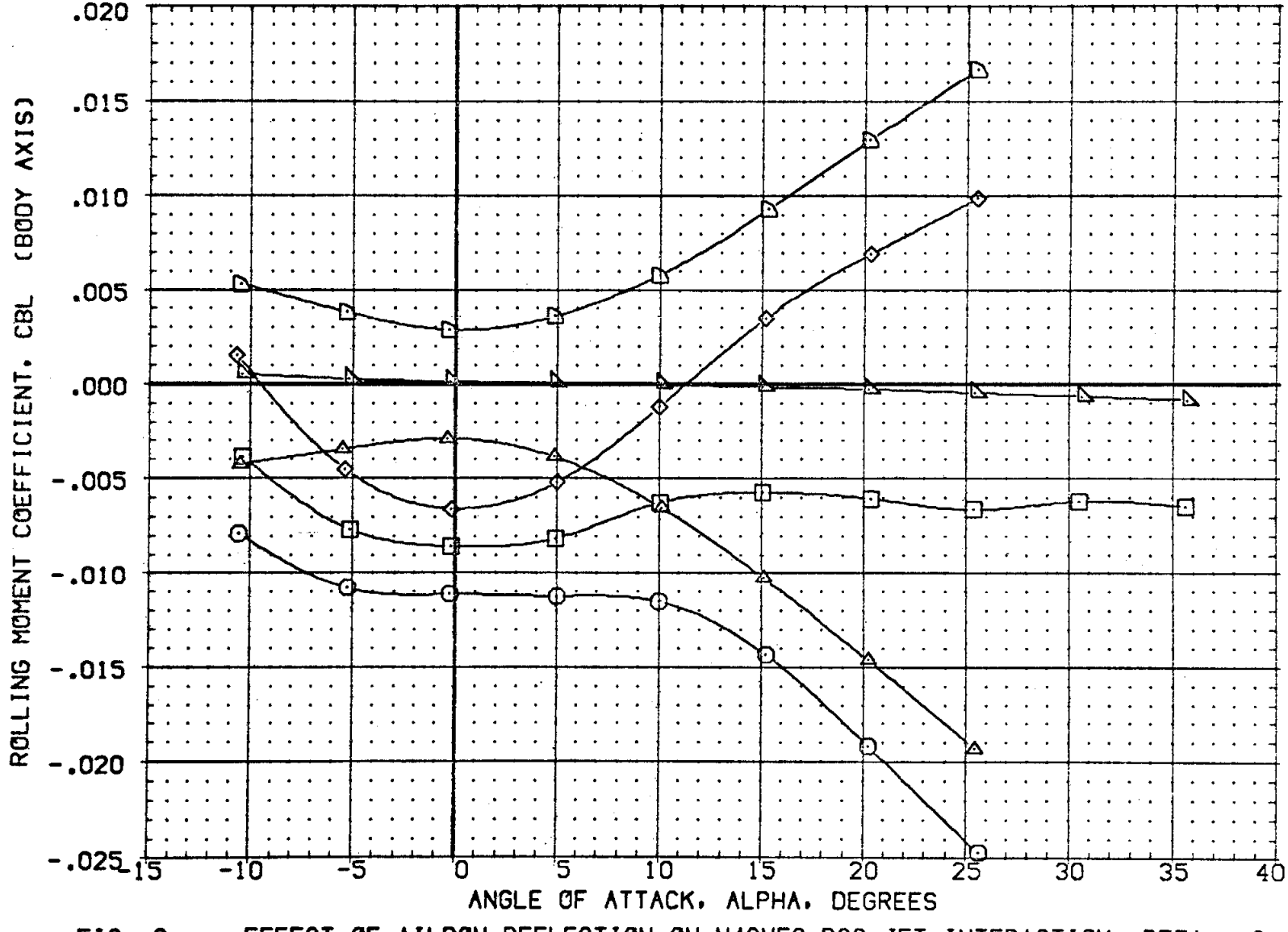


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		AILRON	PCRCS	O-SIM	BDFLAP	REFERENCE INFORMATION		
(ZH232N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000	SREF	2690.0000	SQ.FT.
(Z0108N)	0A-85 CFHTIC. MODEL 32-0 01N49N52	ROLL		158.000	20.000	.000	LREF	474.8100	IN.
(ZH231N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000	BREF	936.6800	IN.
(ZH208F)	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-15.000	.000	.000	.000	XMRP	1076.6700	IN. XO
(Z0103F)	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF		.000	.000	.000	YMRP	.0000	IN. YO
(ZH207F)	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	15.000	.000	.000	.000	ZMRP	375.0000	IN. ZO
							SCALE	.0100	

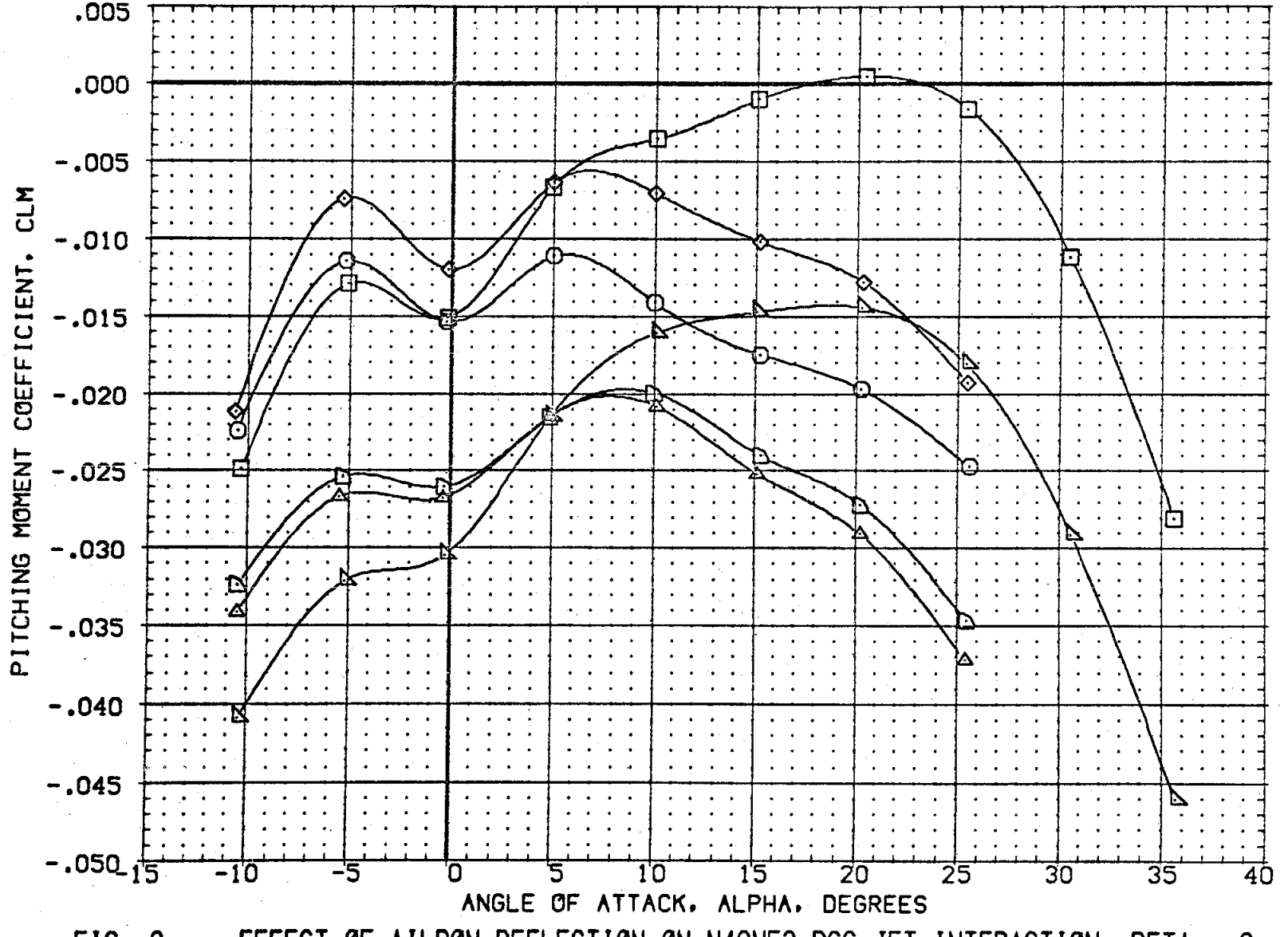


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		AILRON	PCRCS	Q-SIM	BDFLAP
(ZH232N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-15.000	158.000	20.000	.000
(ZQ108N)	□	0A-85 CFHT101 MODEL 32-0 0!N49N52	ROLL		158.000	20.000	.000
(ZH231N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	15.000	158.000	20.000	.000
(ZH208F)	△	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-15.000	.000	.000	.000
(ZQ103F)	▽	0A-85 CFHT101 MODEL 32-0 0! N52	RCS OFF		.000	.000	.000
(ZH207F)	⊳	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

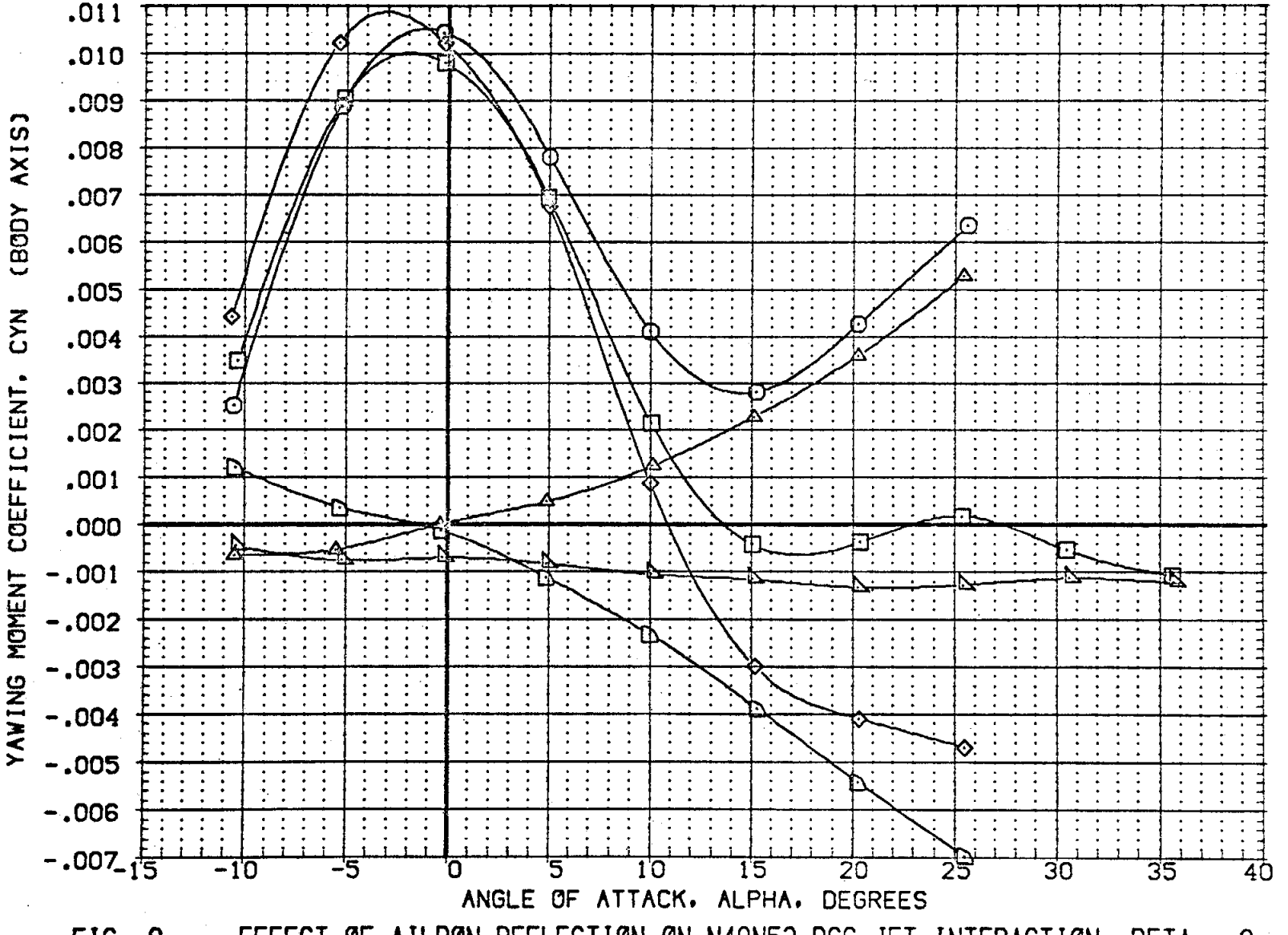


FIG 8 EFFECT OF AILRON DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

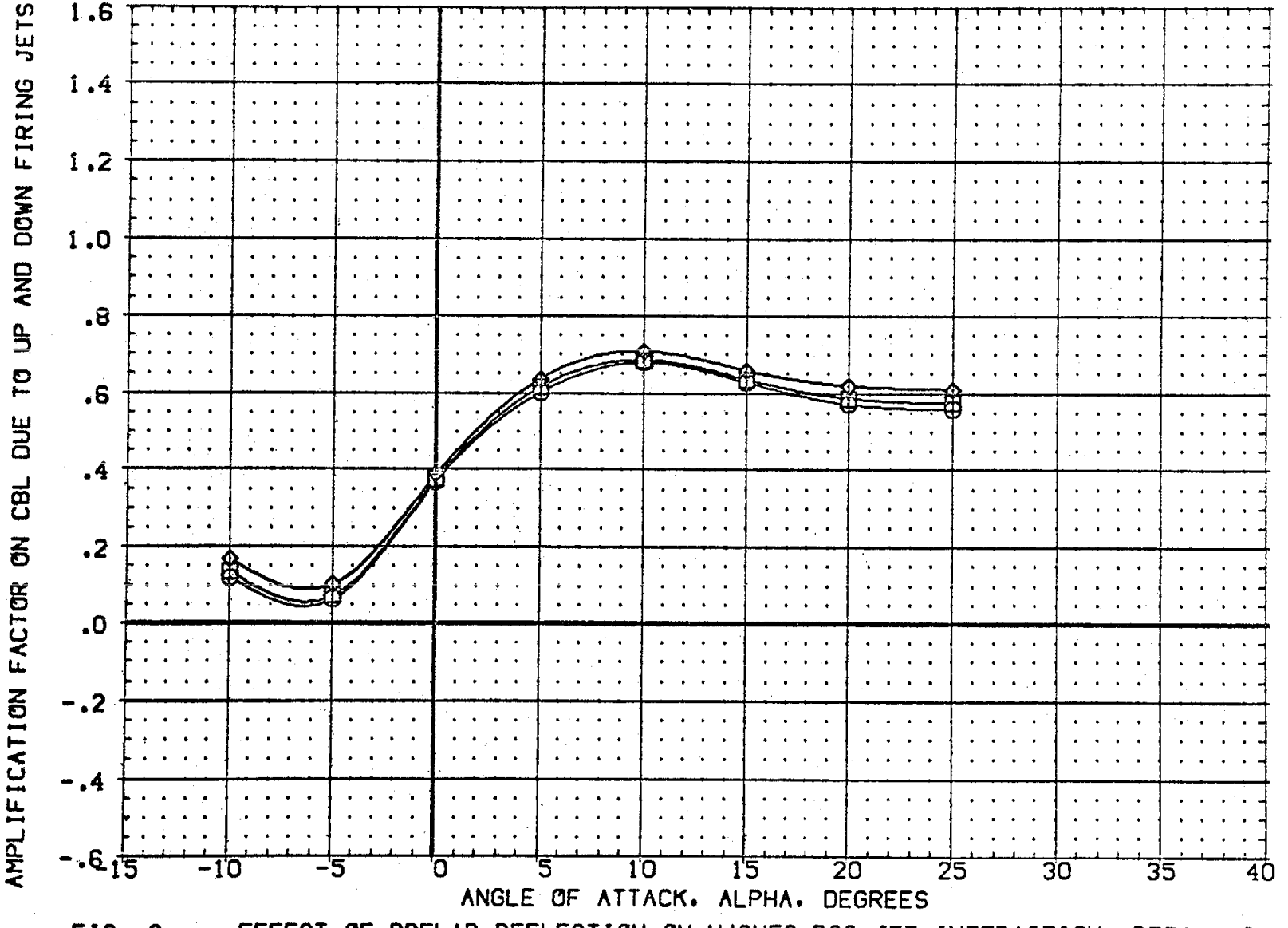


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

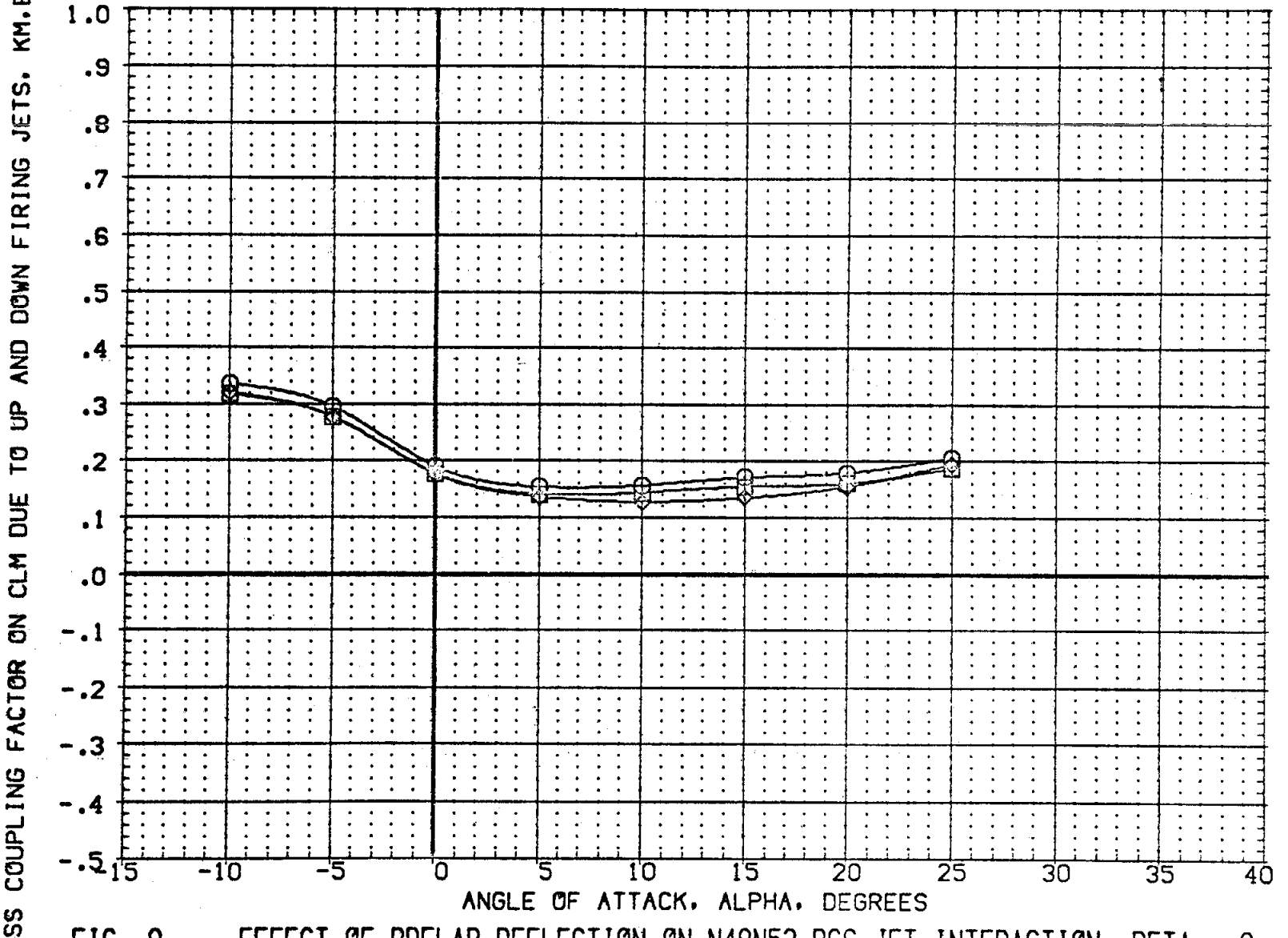


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	○	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	□	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	◇	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

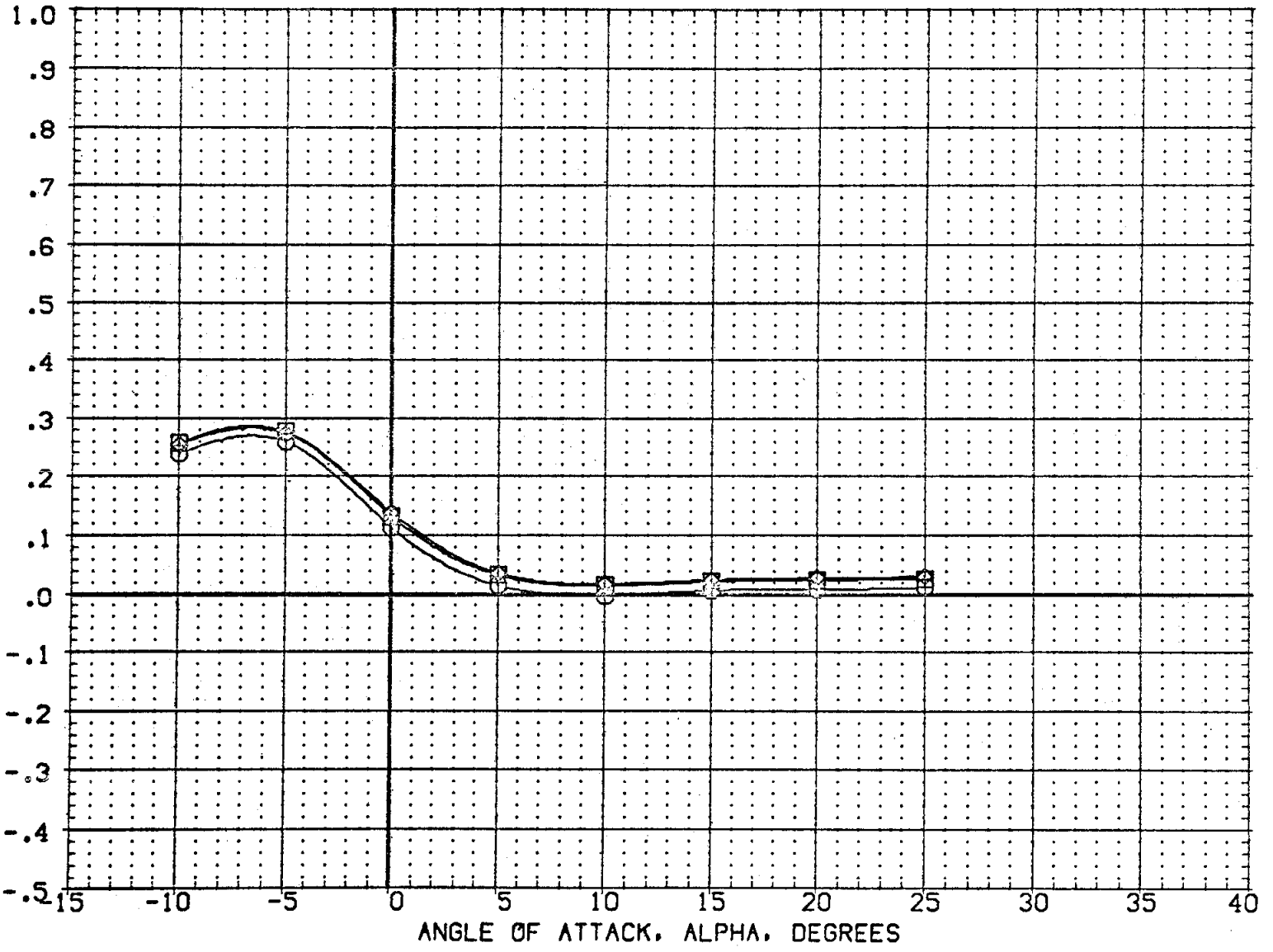


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

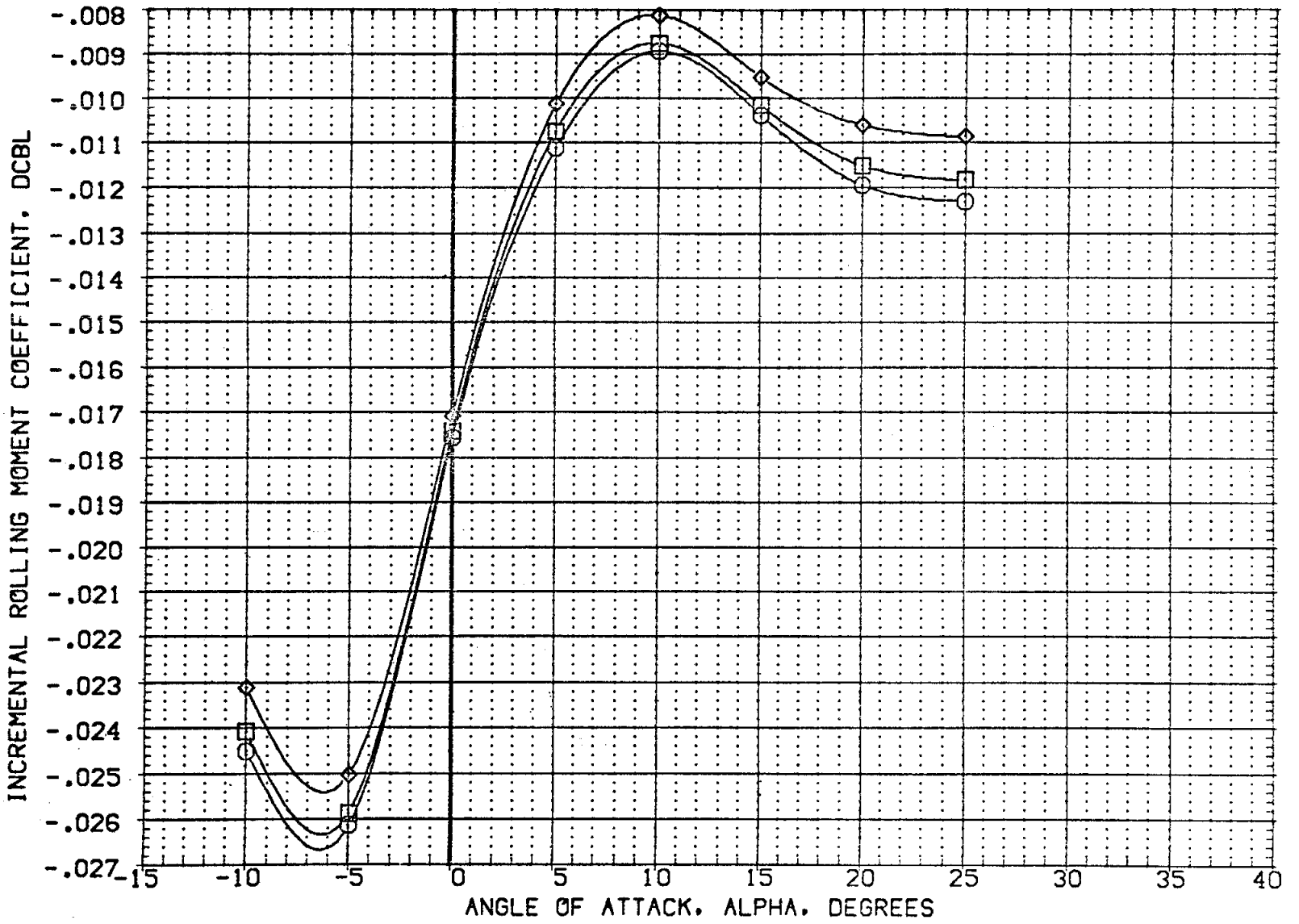


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	○	0A10S CFRT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	□	0A10S CFRT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	◇	0A10S CFRT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

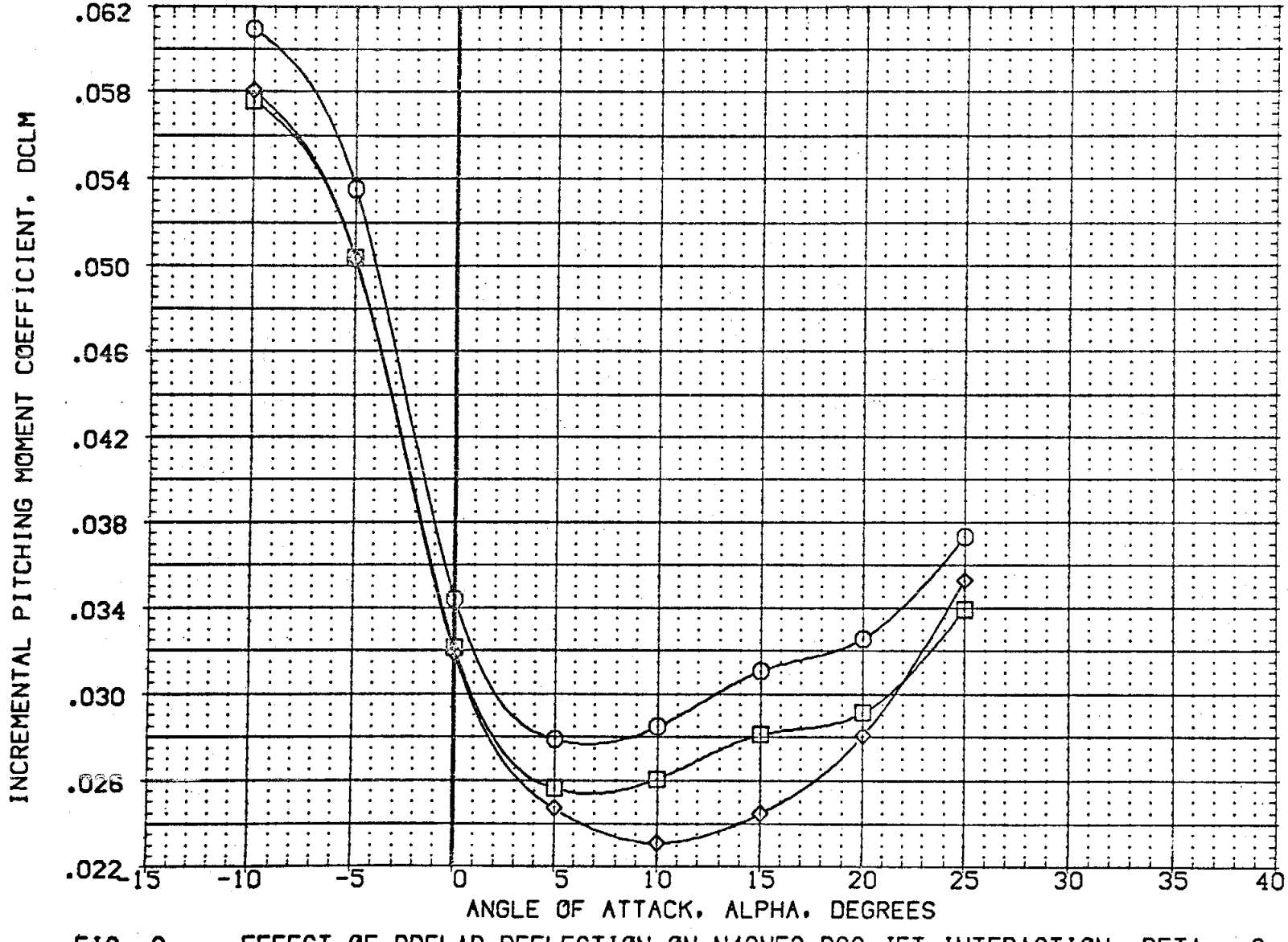


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BOFLAP	PCRCS	ELEVON	Q-SIM
(CH2018)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(CH2022)	□	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(CH2006)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM	REFERENCE INFORMATION		
(ZH218N)	○	0A105 CFHTI09 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000	SREF	2690.0000	SQ.FT.
(ZH222N)	□	0A105 CFHTI09 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000	LREF	474.8100	IN.
(ZH206N)	◇	0A105 CFHTI09 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000	BREF	936.6800	IN.
(ZH202F)	△	0A105 CFHTI09 MODEL 32 0(0) NNS2	RCS OFF	-14.250	.000	.000	.000	XMRP	1076.6700	IN. XO
(ZH203F)	▽	0A105 CFHTI09 MODEL 32 0(0) NNS1	RCS OFF	.000	.000	.000	.000	YMRP	.0000	IN. YO
(ZH201F)	▷	0A105 CFHTI09 MODEL 32 0(0) NS1	RCS OFF	13.750	.000	.000	.000	ZMRP	375.0000	IN. ZO
								SCALE	.0100	

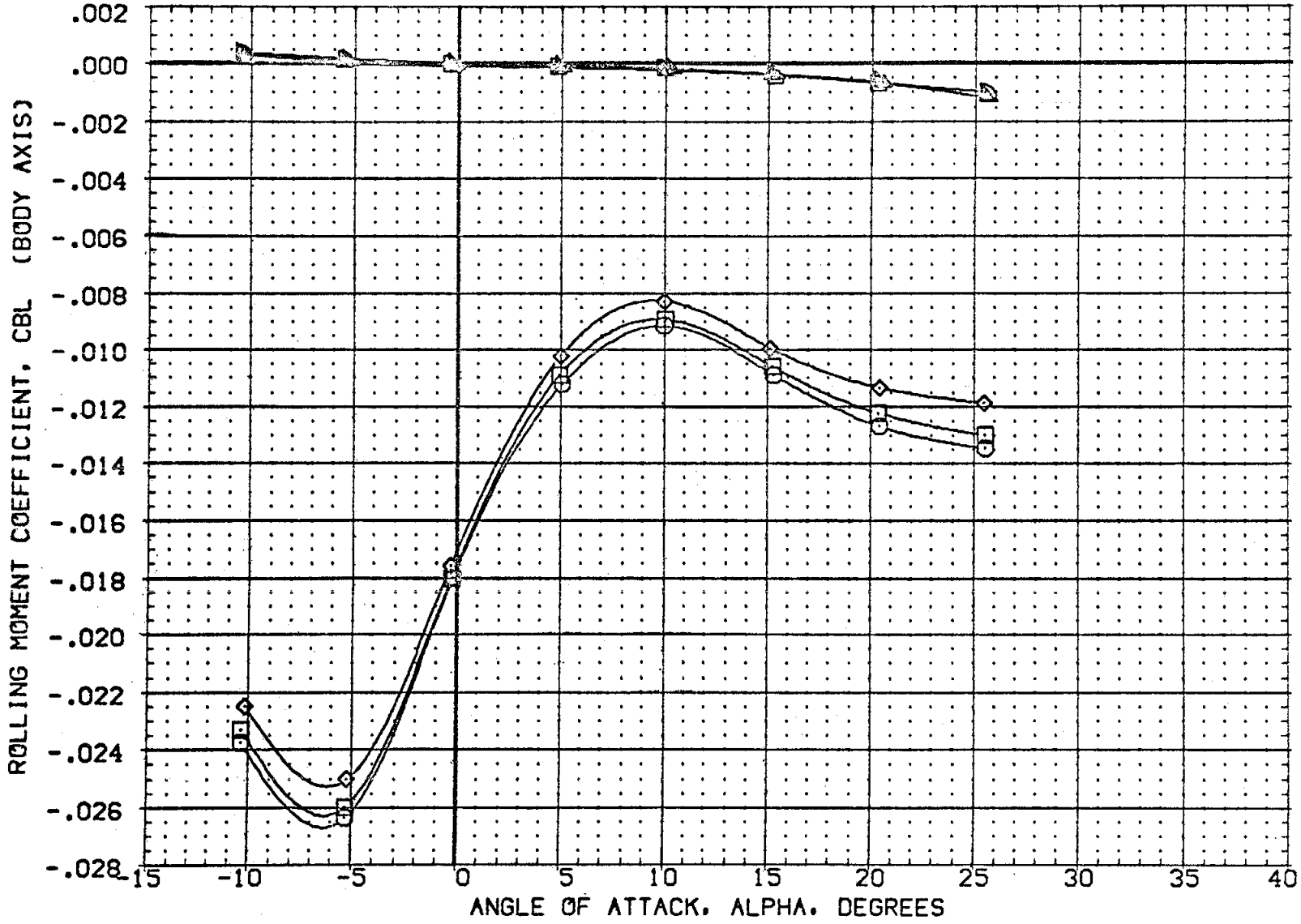


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH218N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(ZH222N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(ZH206N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000
(ZH202F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

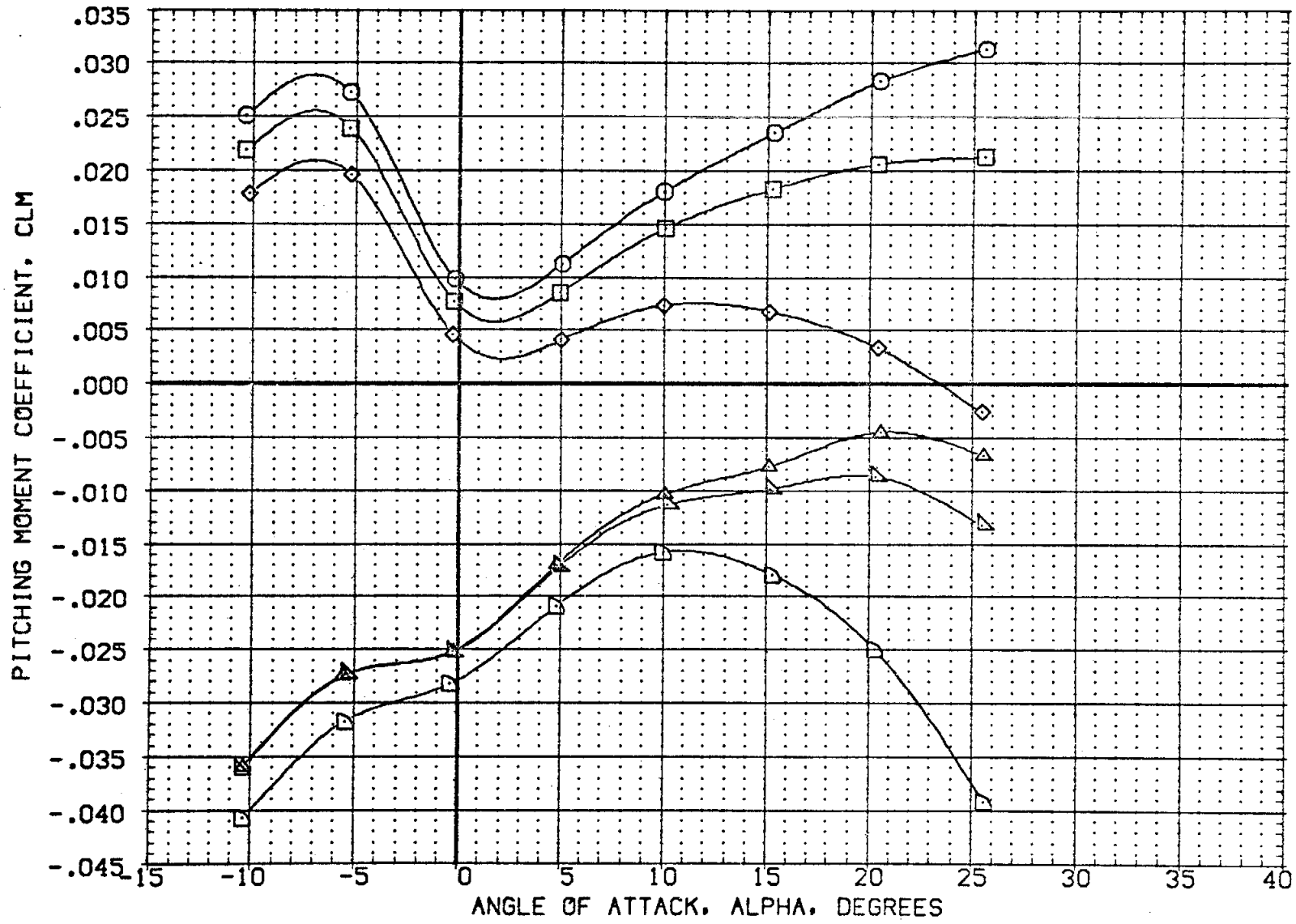


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH218N)	○	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	446.000	.000	7.000
(ZH222N)	□	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	.000	7.000
(ZH206N)	◇	0A10S CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	446.000	.000	7.000
(ZH202F)	△	0A10S CFHT103 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A10S CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	⊲	0A10S CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

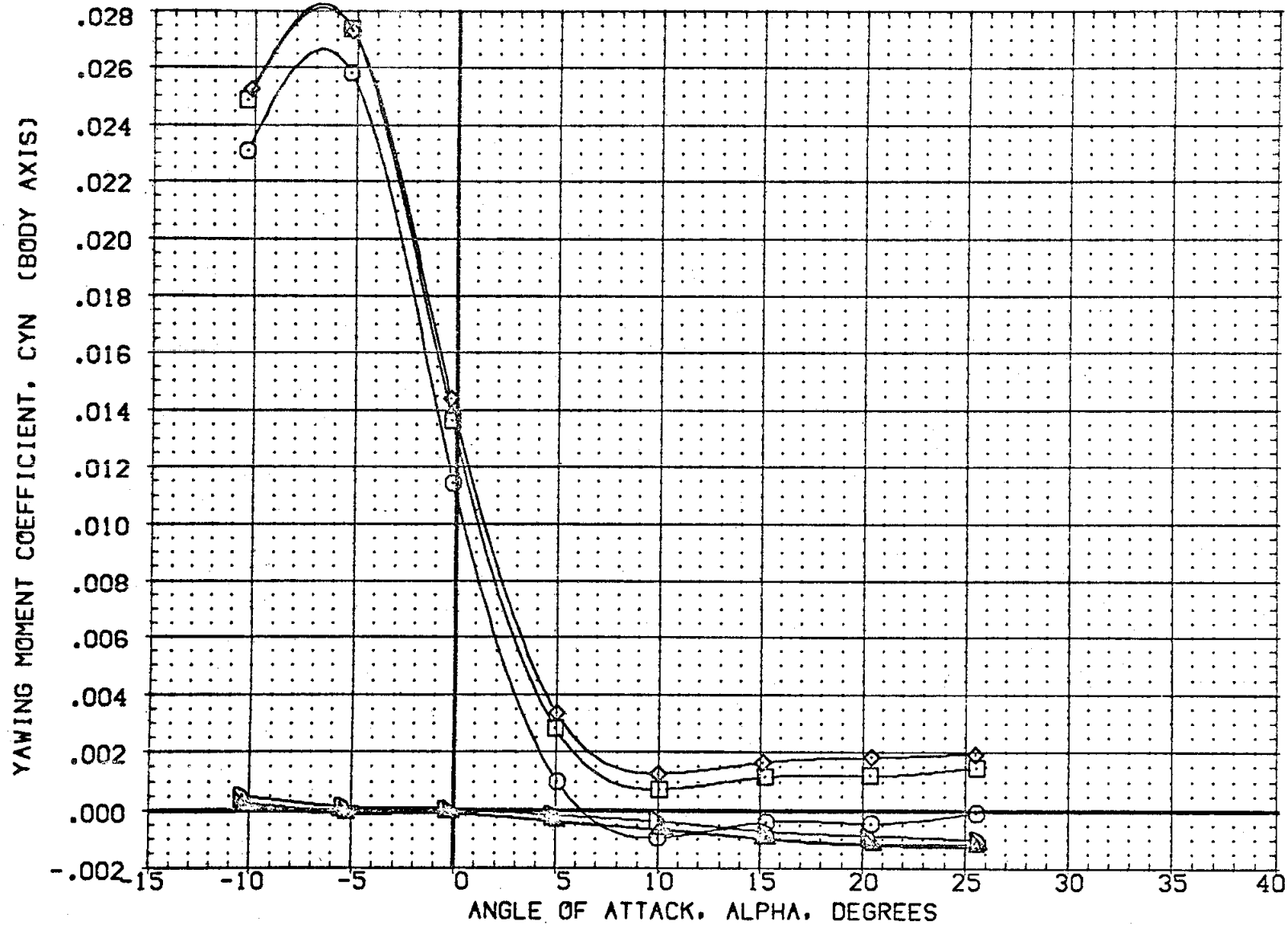


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

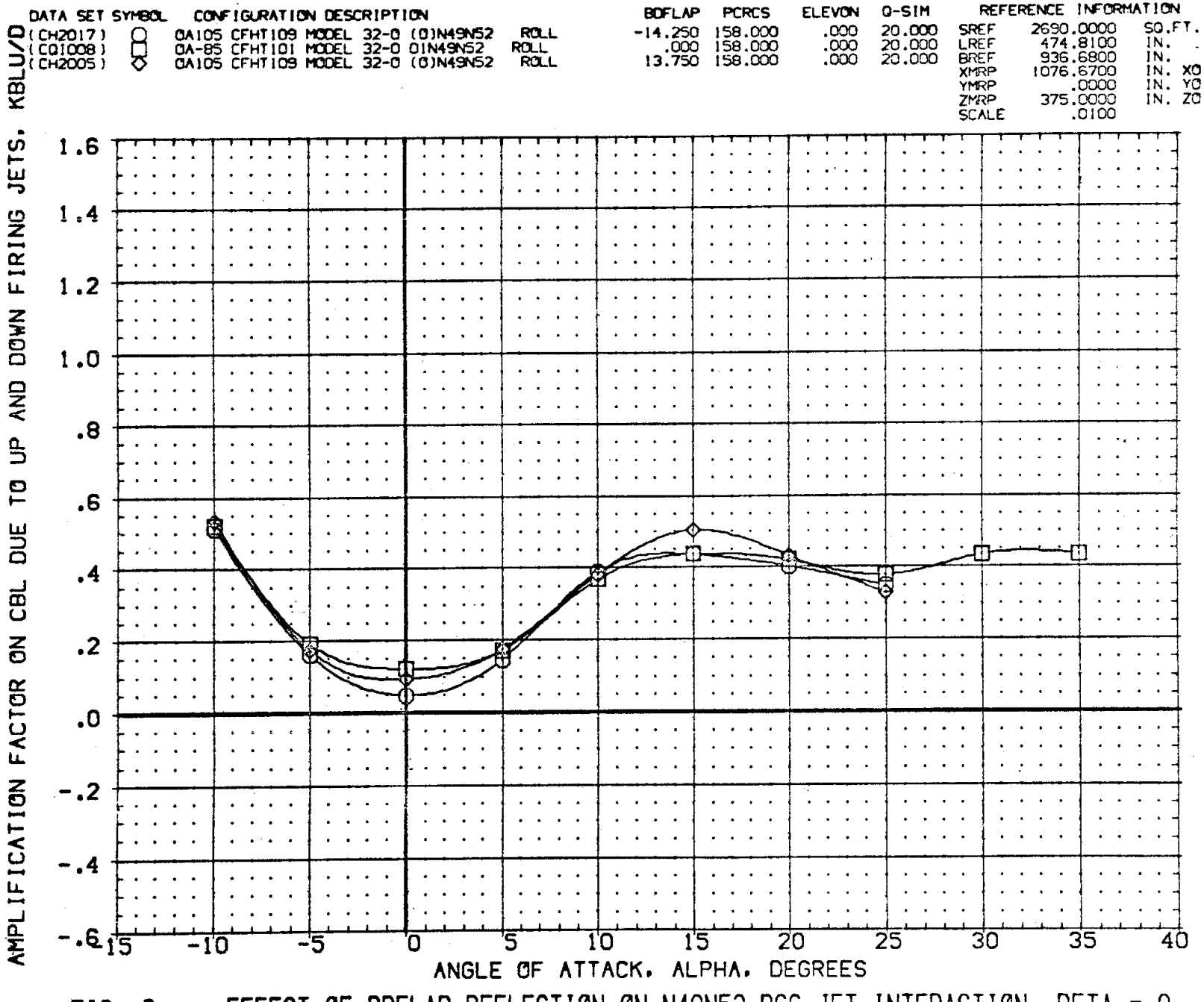


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2017)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(CH2005)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

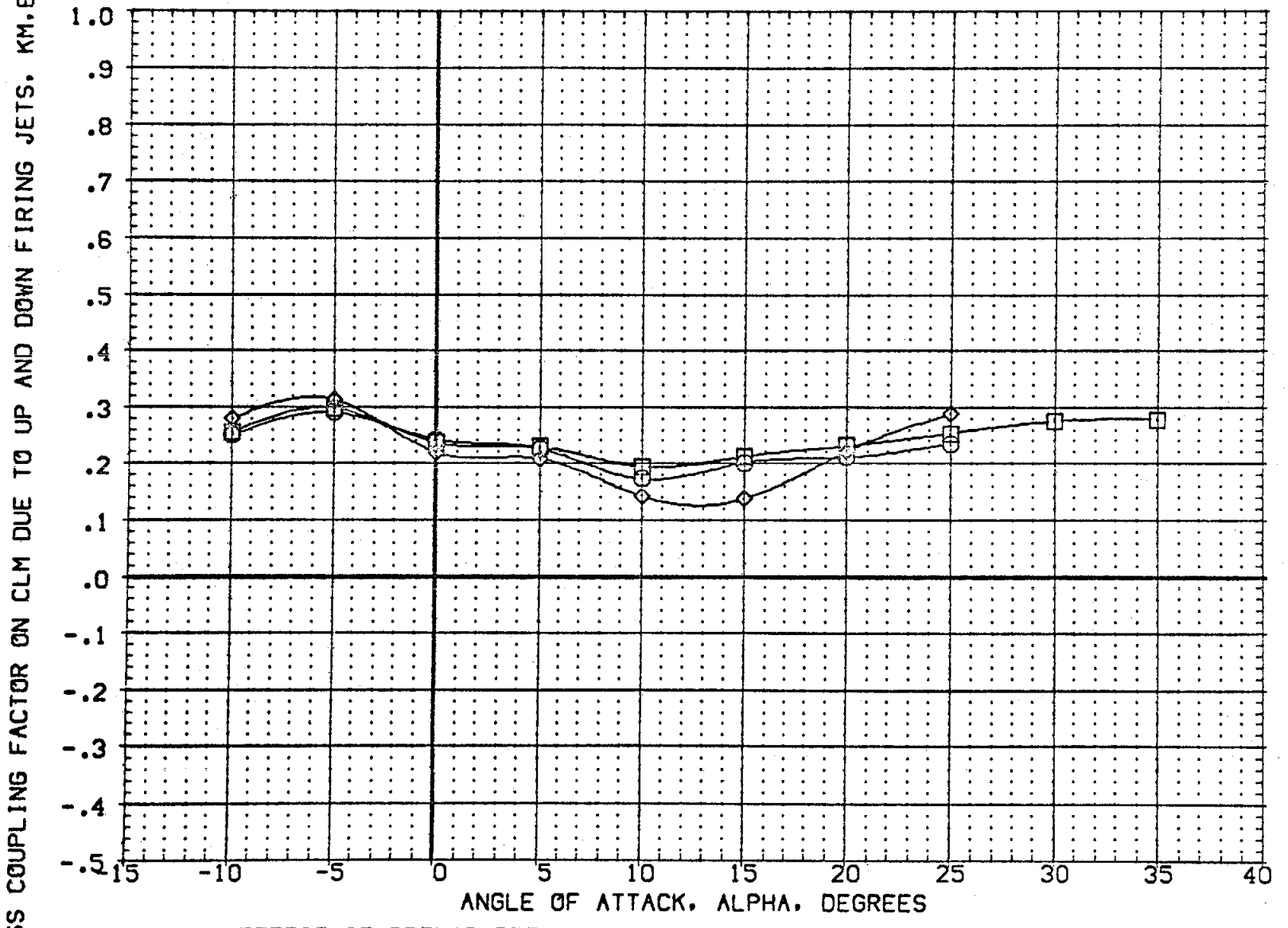


FIG 9 EFFECT ØF BDFLAP DEFLECTIØN ØN N49N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2017)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(C01008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(CH2005)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

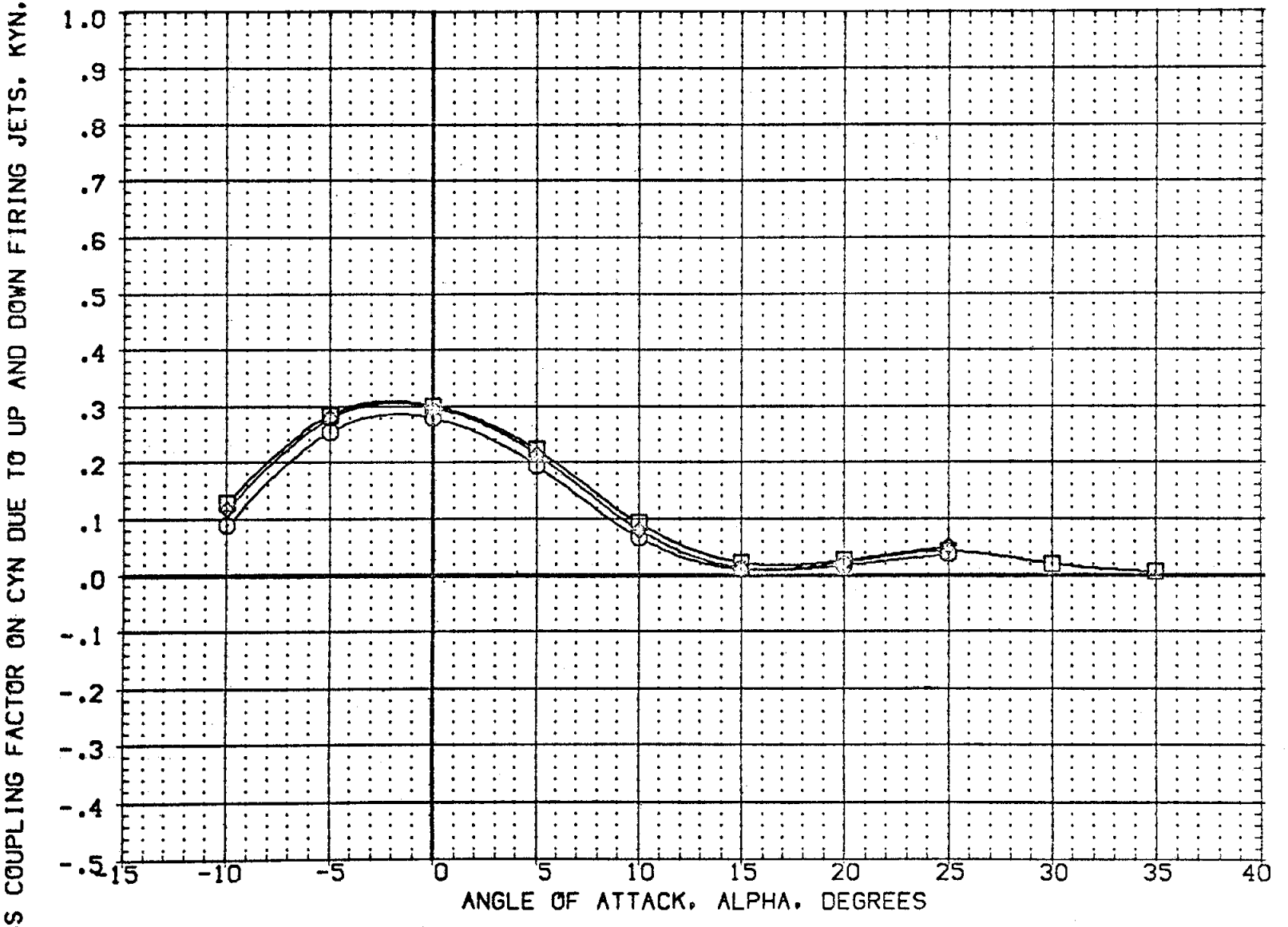


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

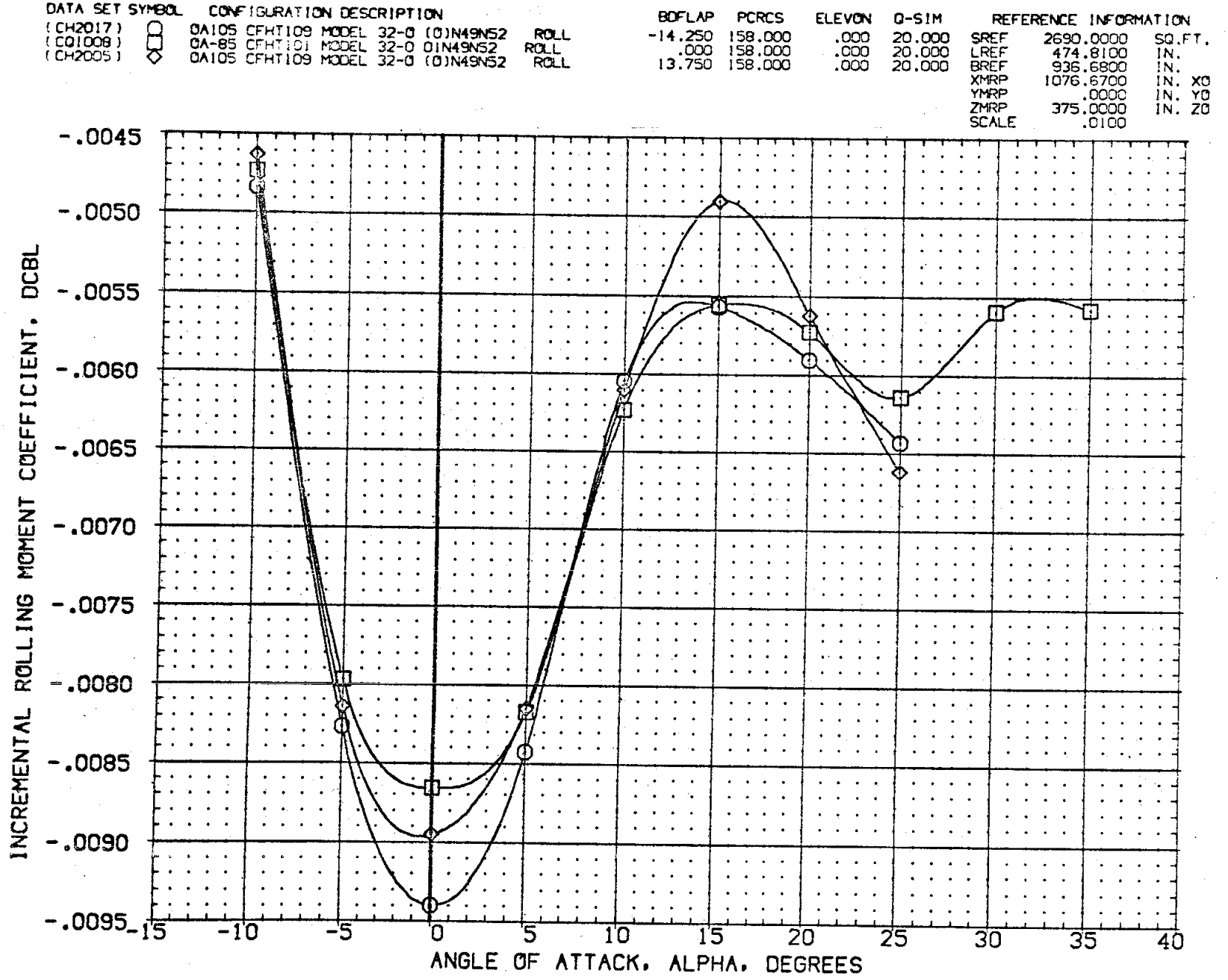


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2017)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(CH2005)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

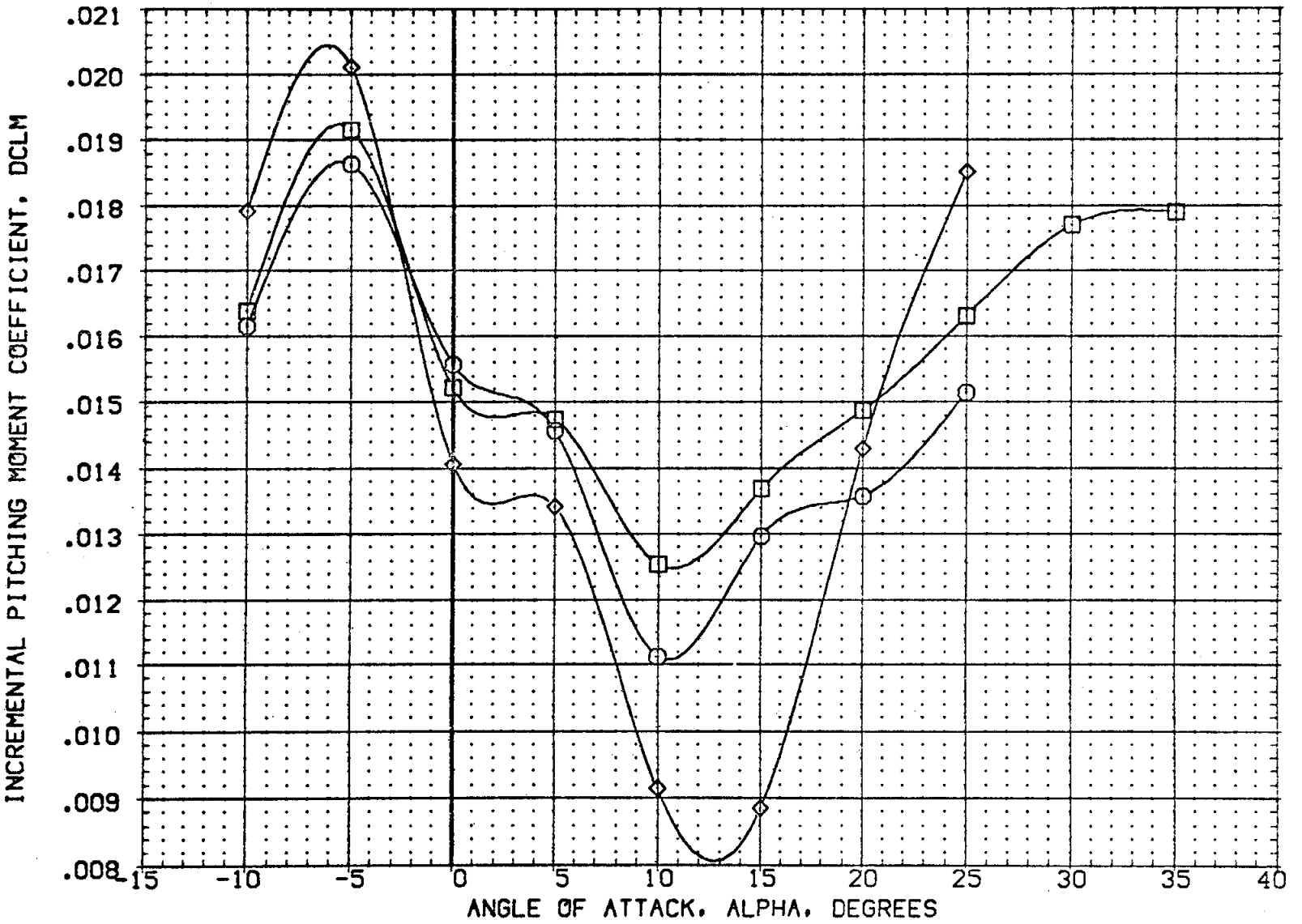


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2017)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(CH2005)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

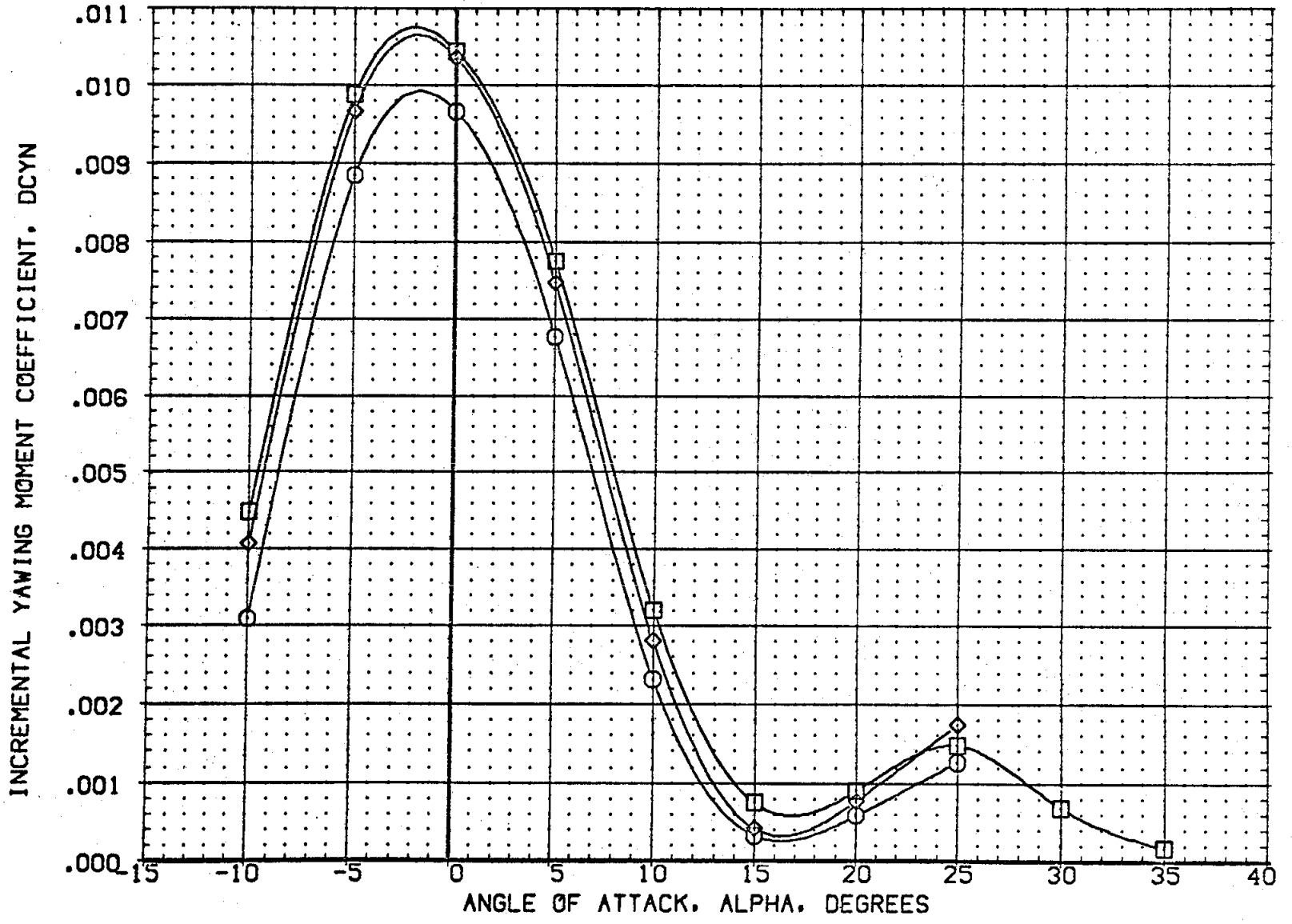


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH217N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(Z0108N)	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(ZH205N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000
(ZH202F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(Z0103F)	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

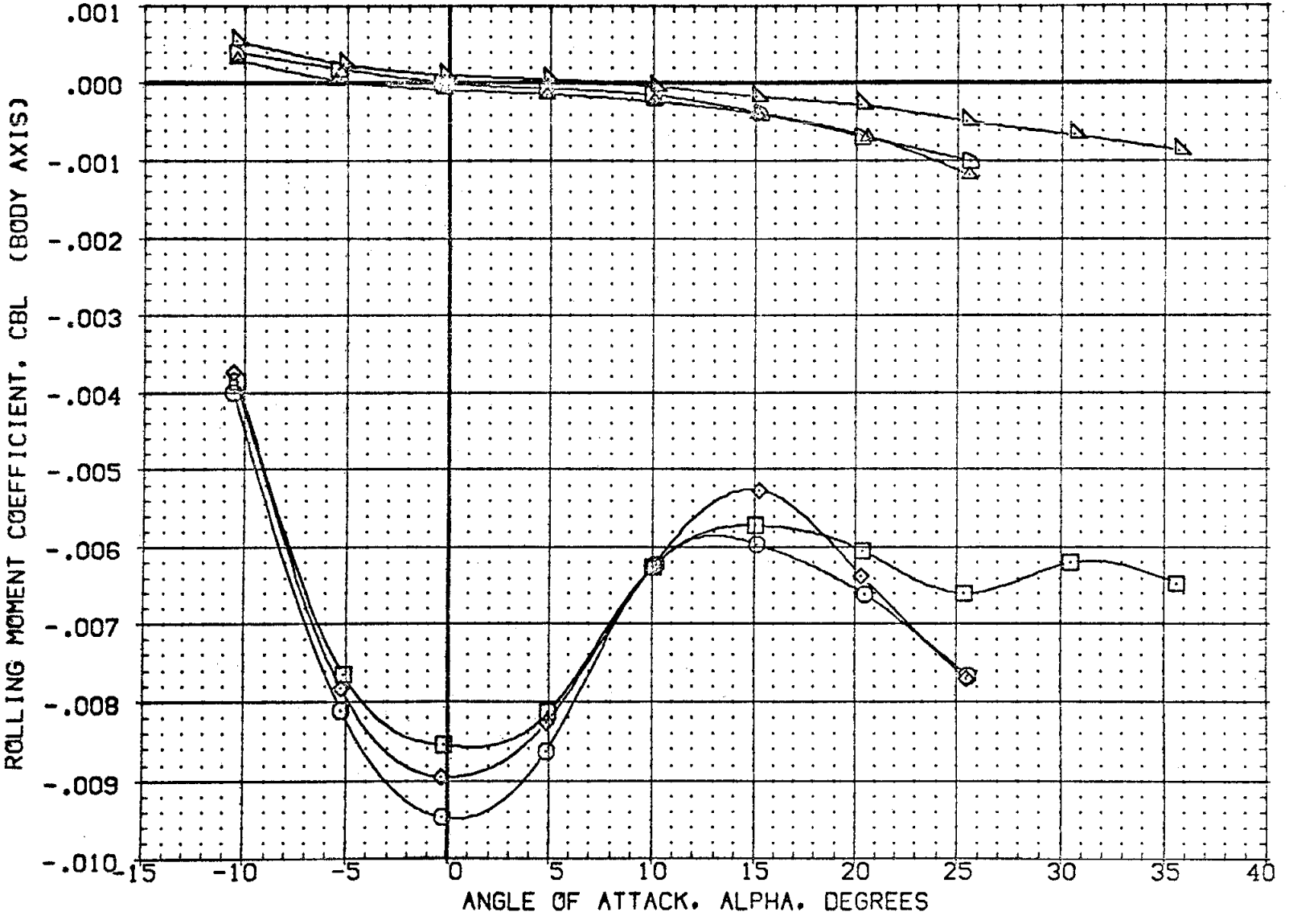


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH217N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(ZQ108N)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(ZH205N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZQ103F)	▽	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	⊳	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

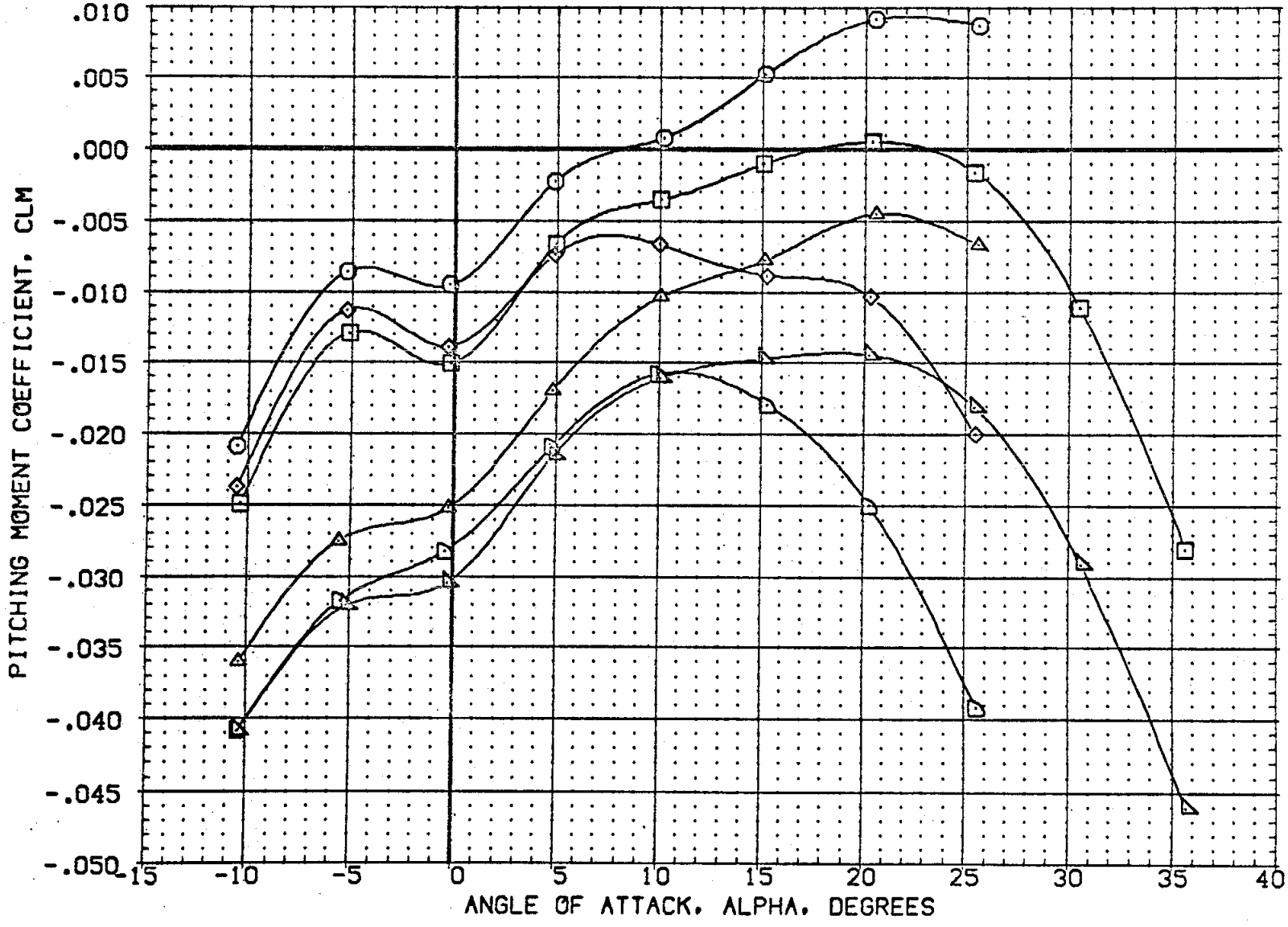


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH217N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-14.250	158.000	.000	20.000
(ZQ108N)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL	.000	158.000	.000	20.000
(ZH205N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZQ103F)	⊲	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

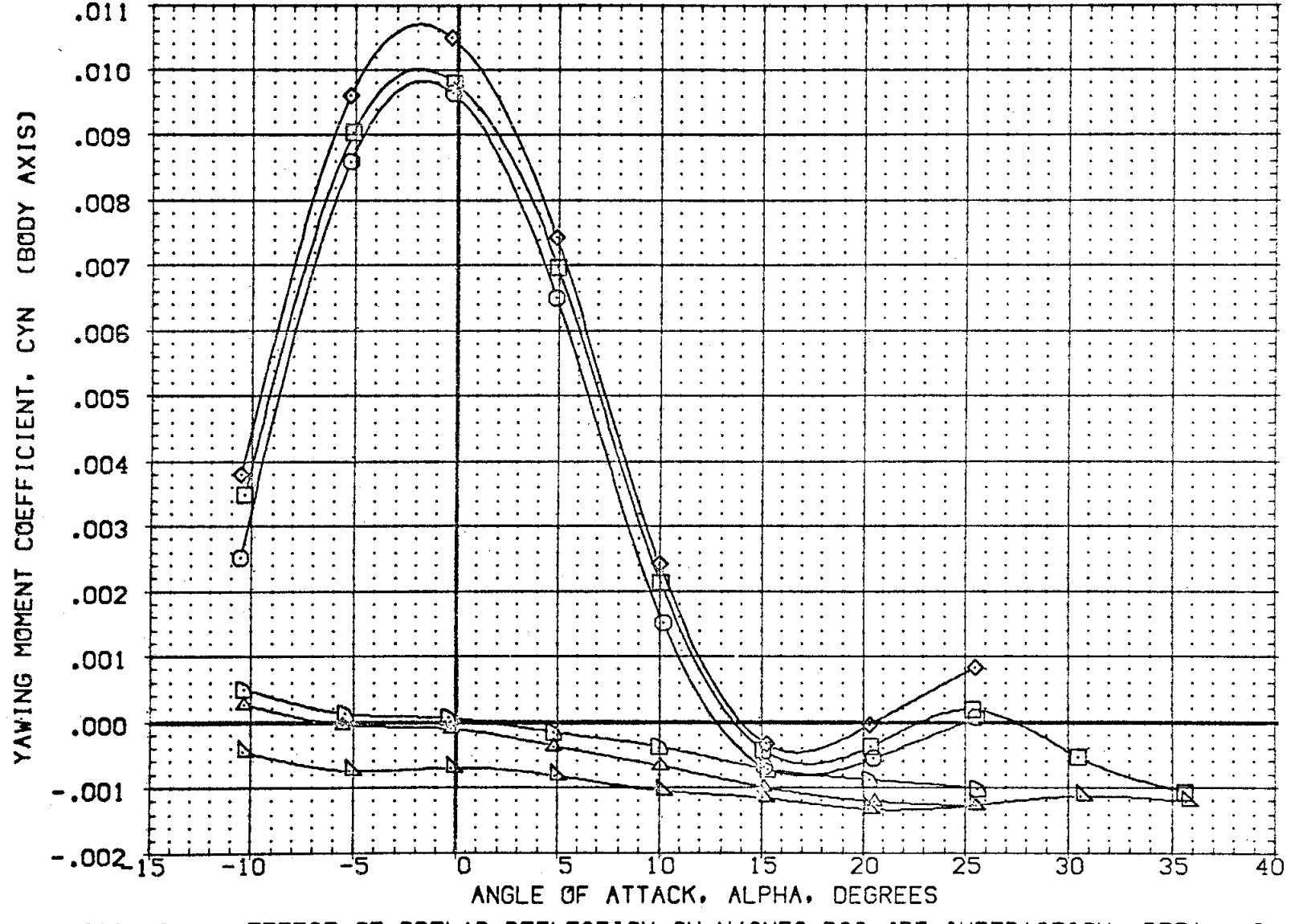


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2004)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

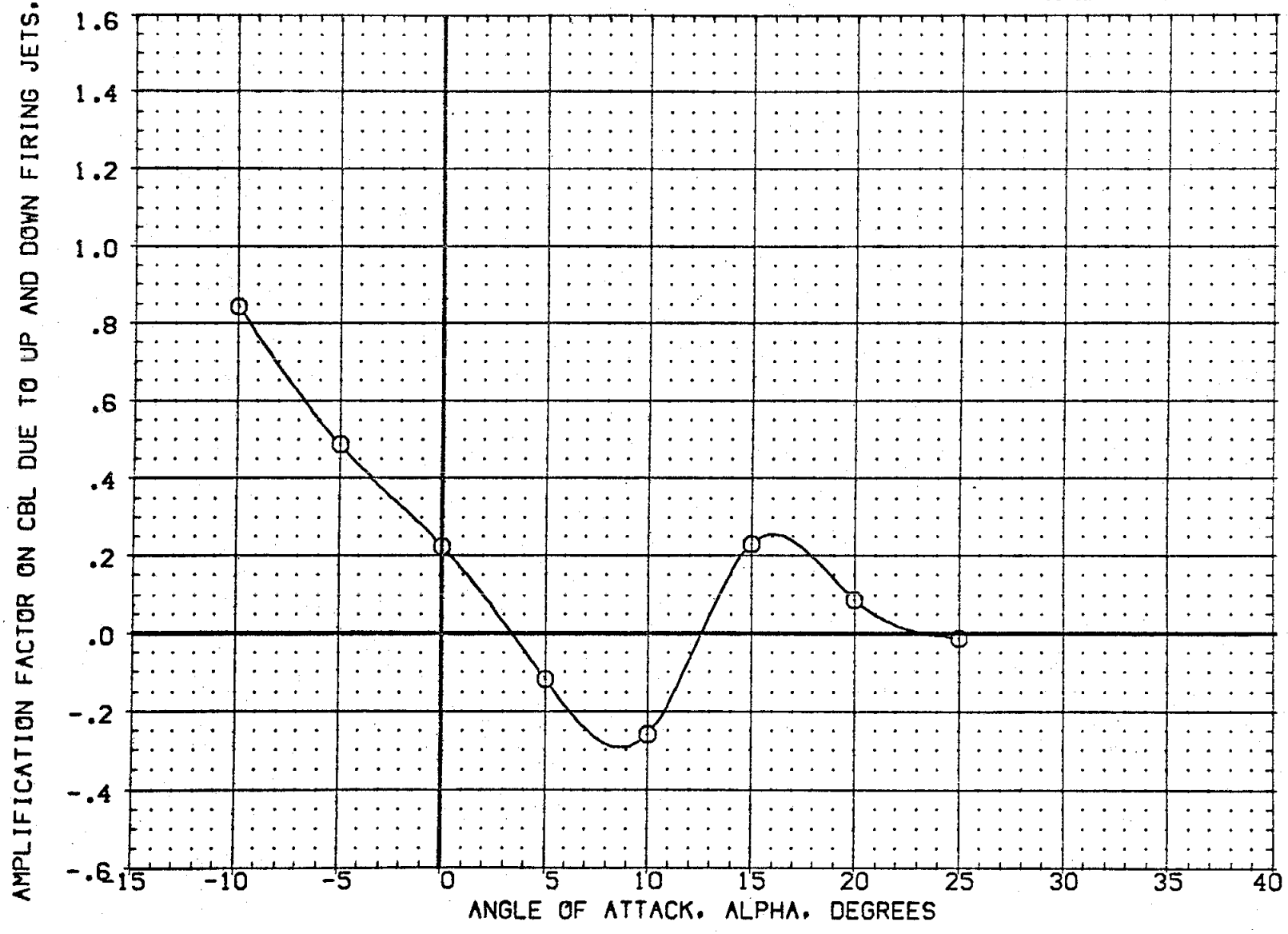


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

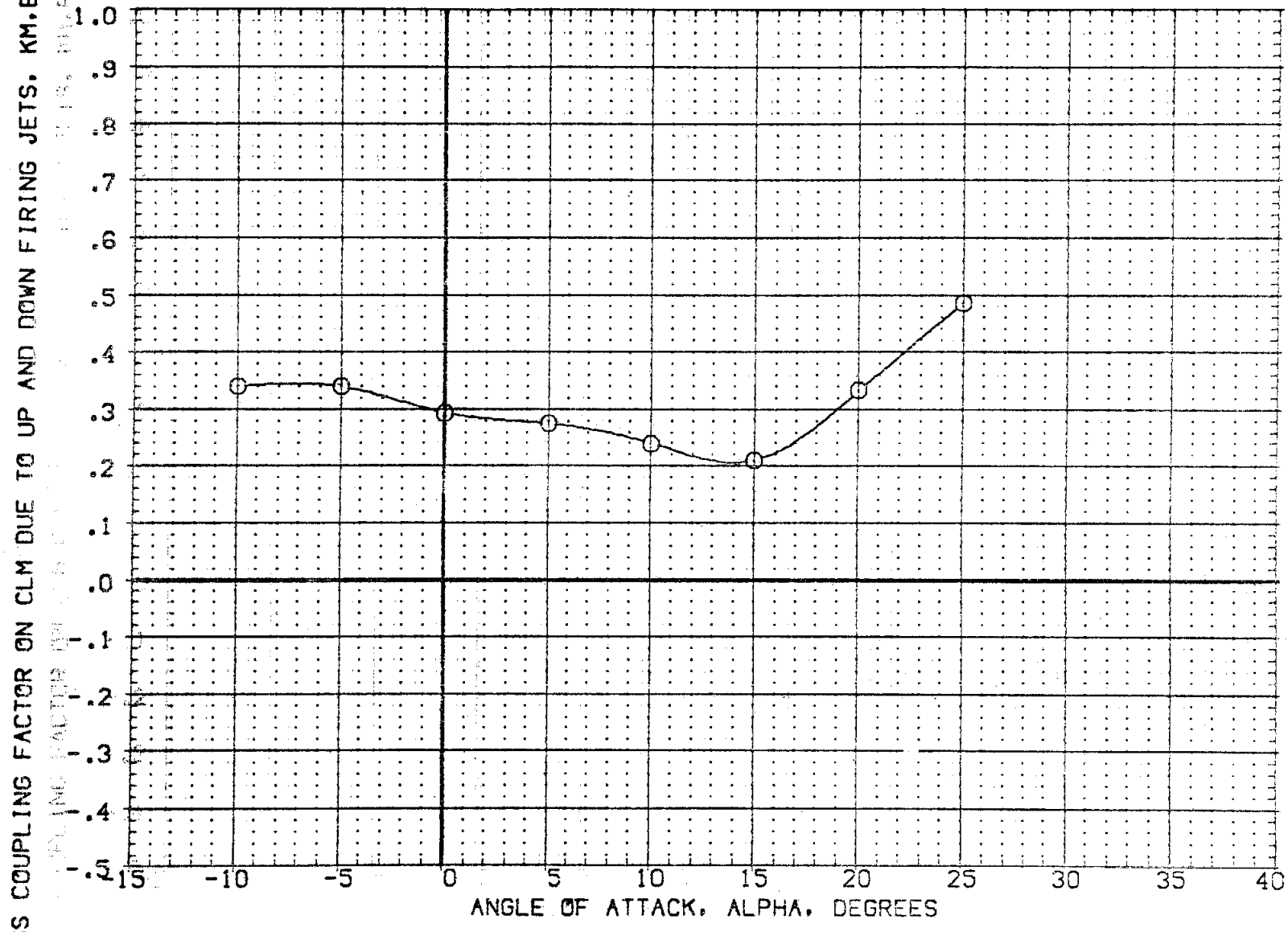


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2004) ○	0A10S CFHT10S MODEL 32-0 (0)N49N52 ROLL	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

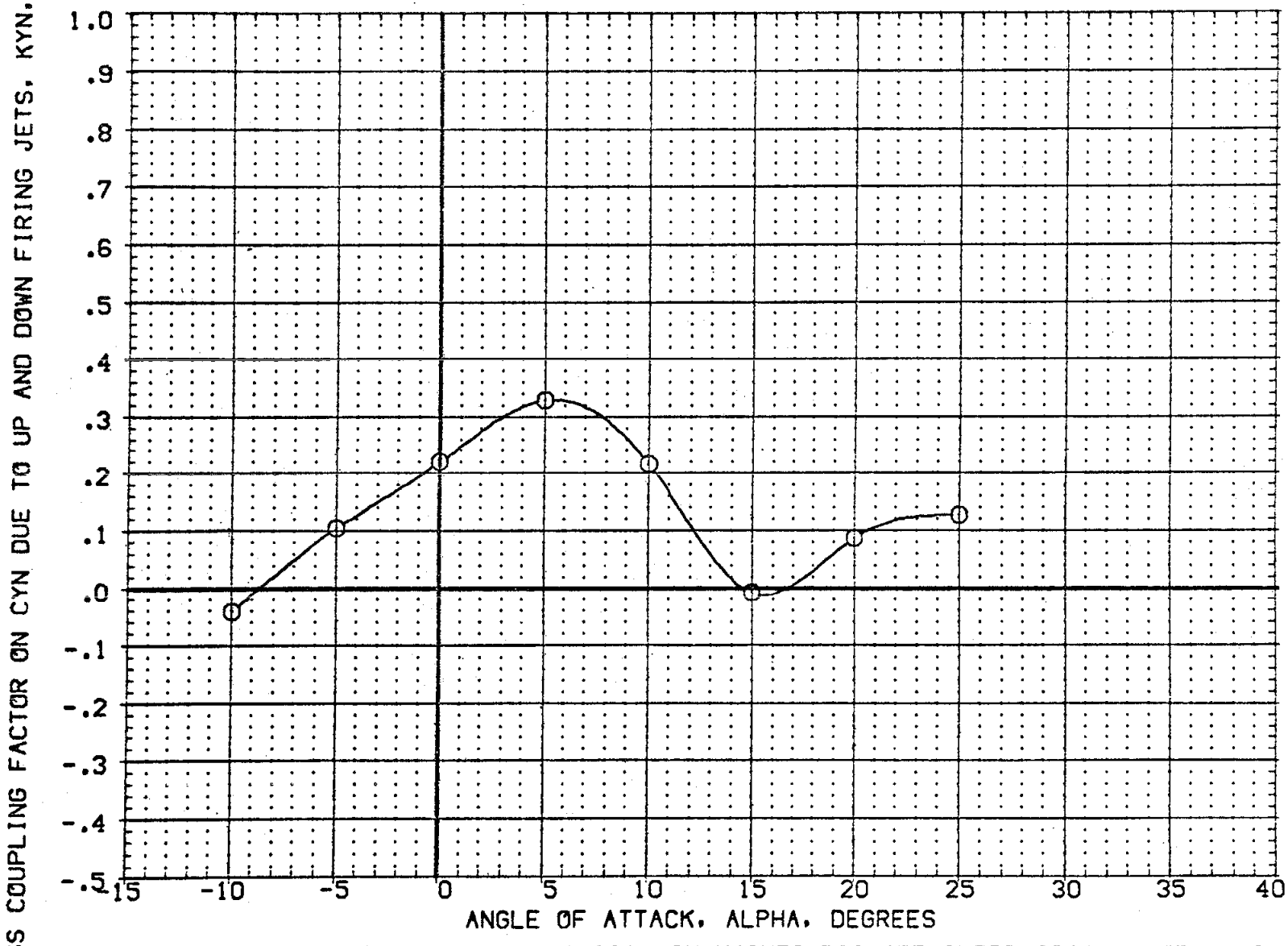


FIG 9 EFFECT ØF BDFLAP DEFLECTIØN ØN N49N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2004) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

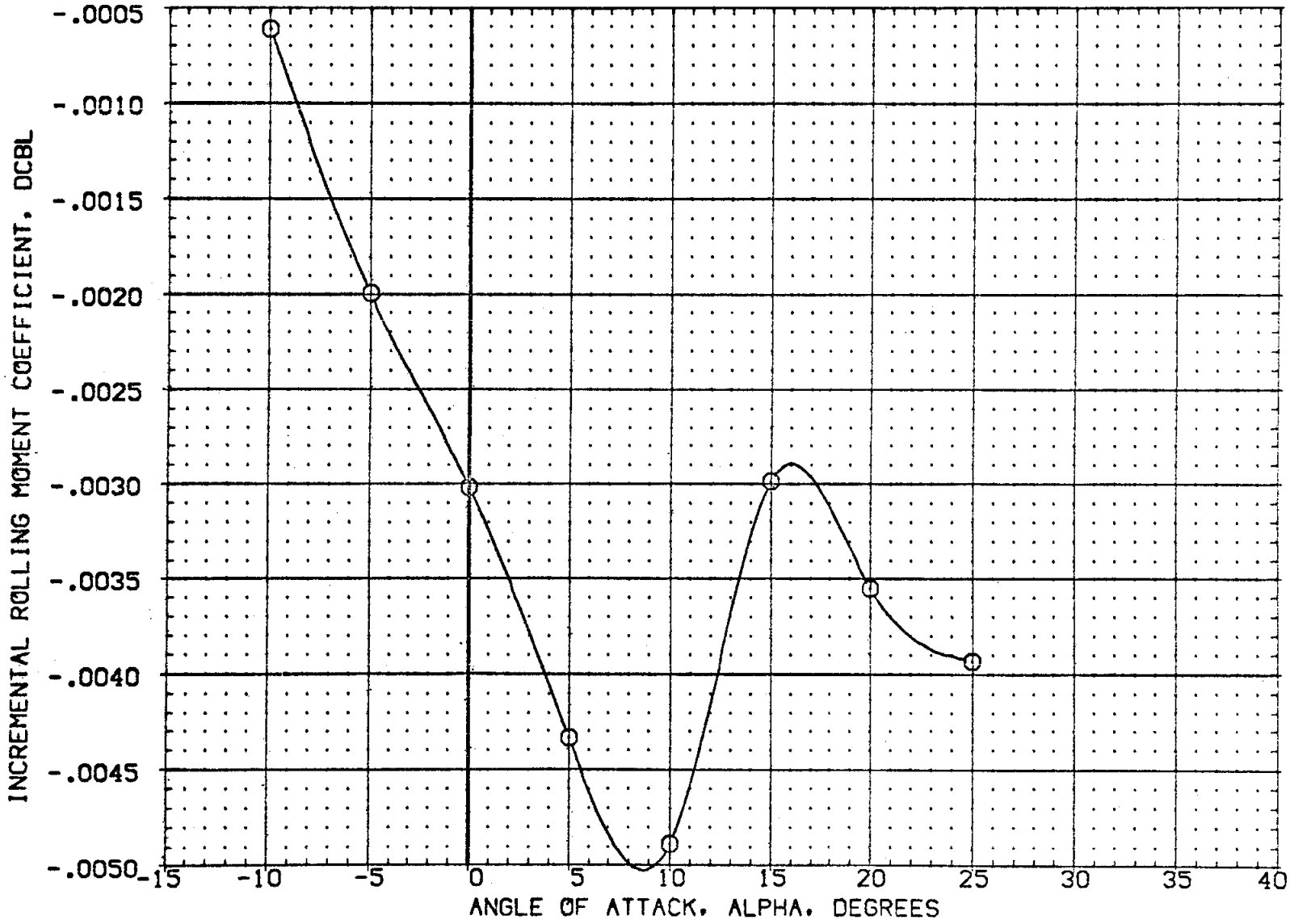


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2004) ○	0A105 ORBITER MODEL 32-0 (0)N49N52 ROLL	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

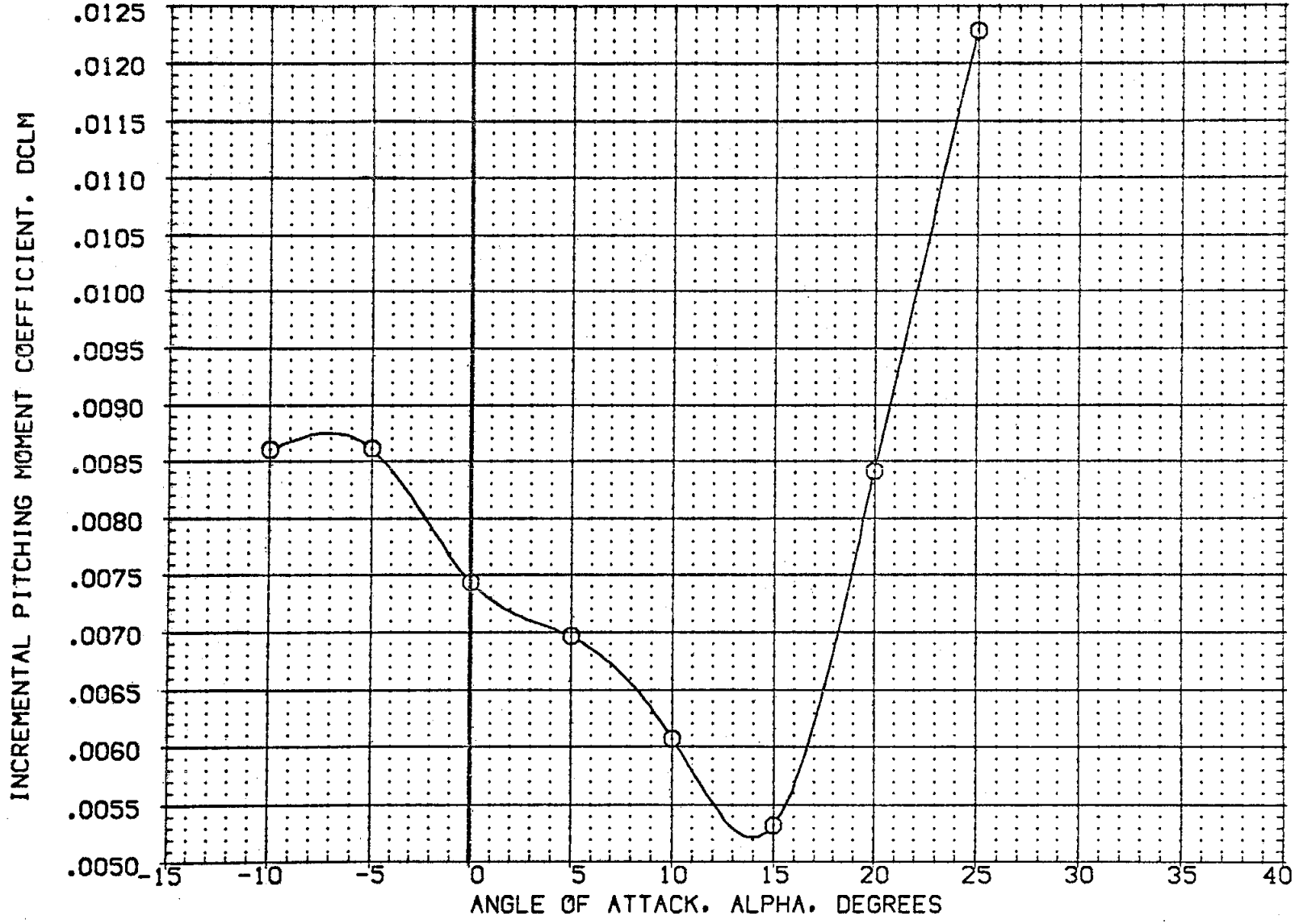


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2004) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

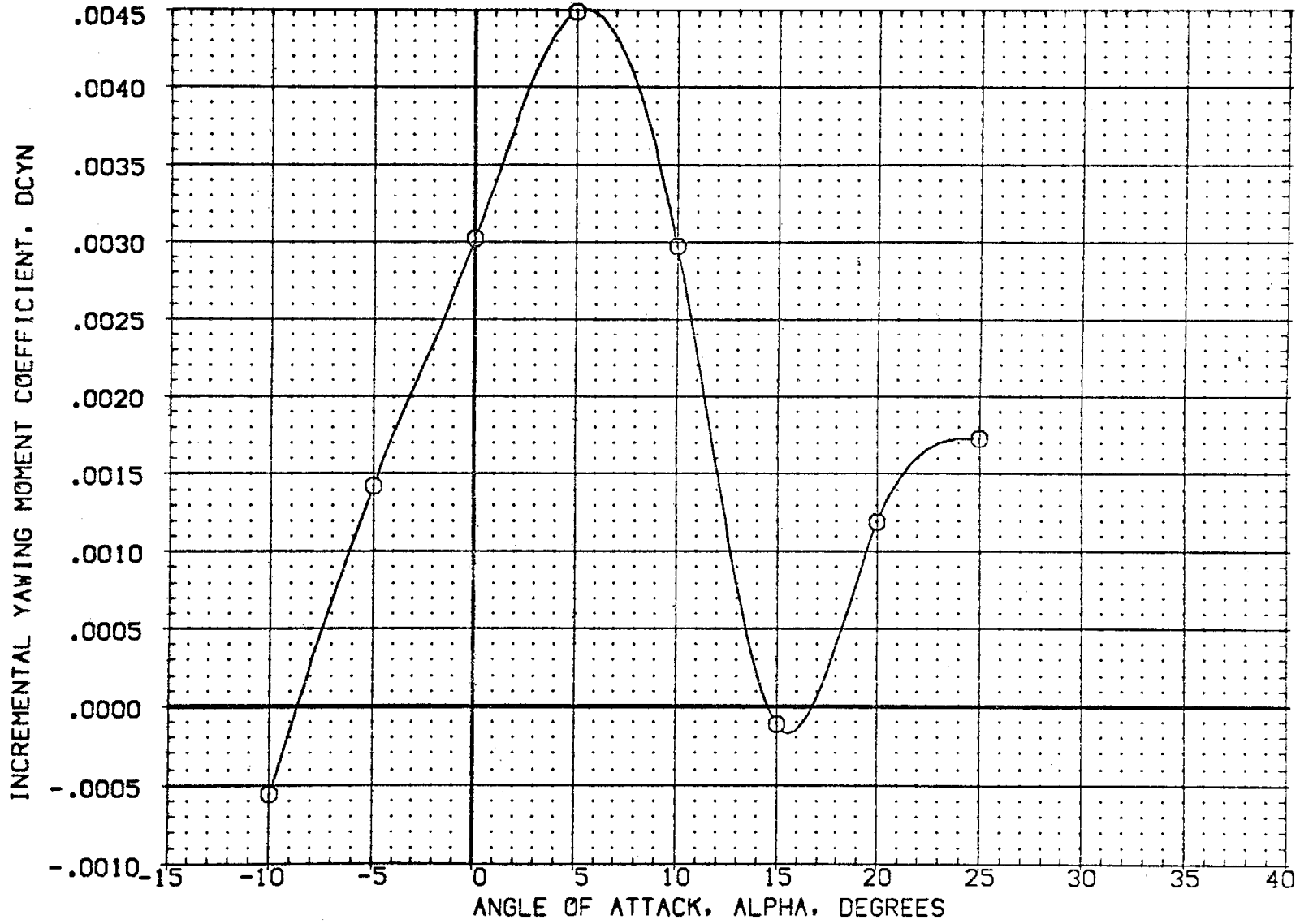


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH204N) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	62.000	.000	50.000
(ZH201F) □	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

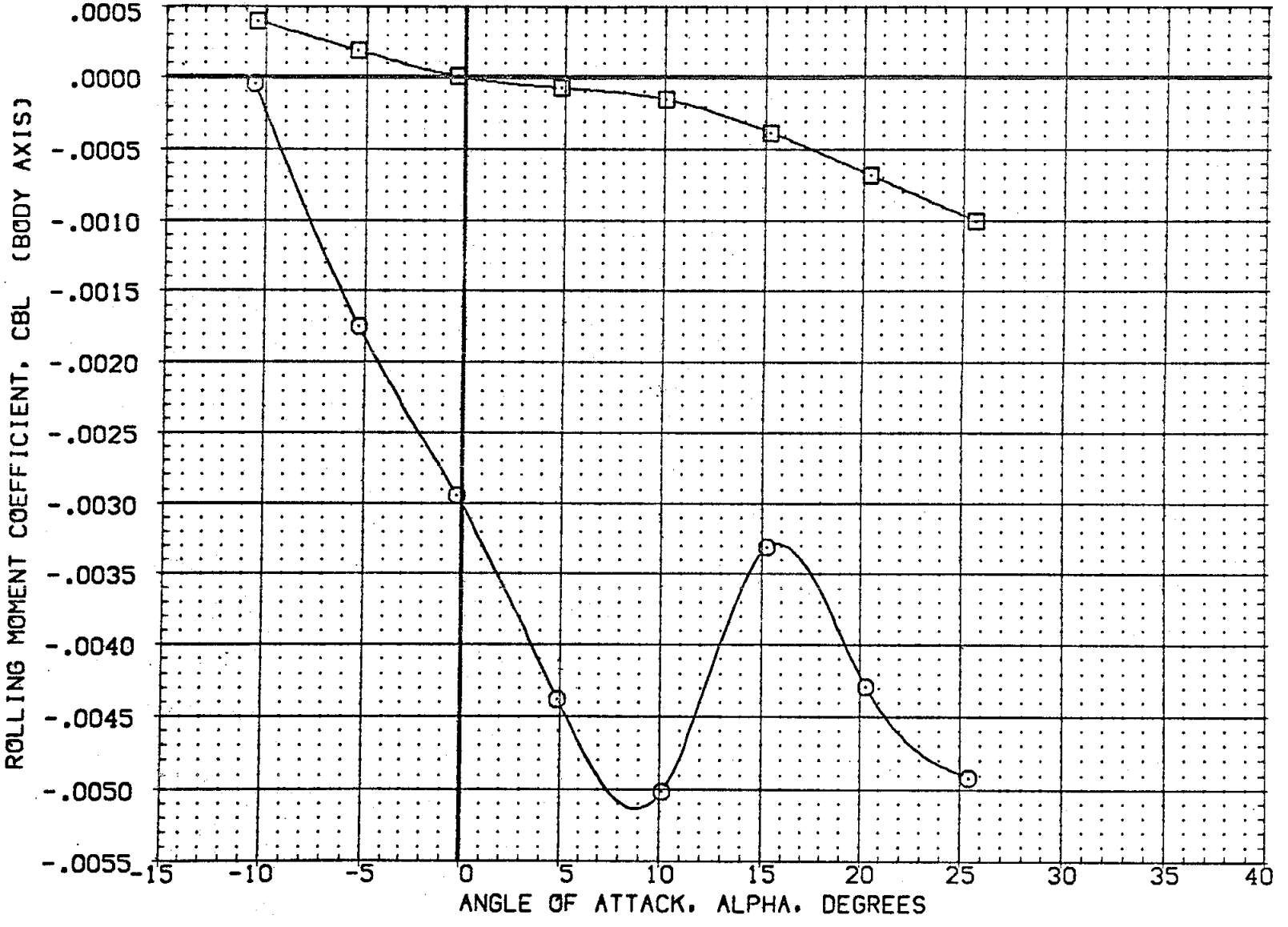


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH204N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	62.000	.000	50.000
(ZH201F)	□	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

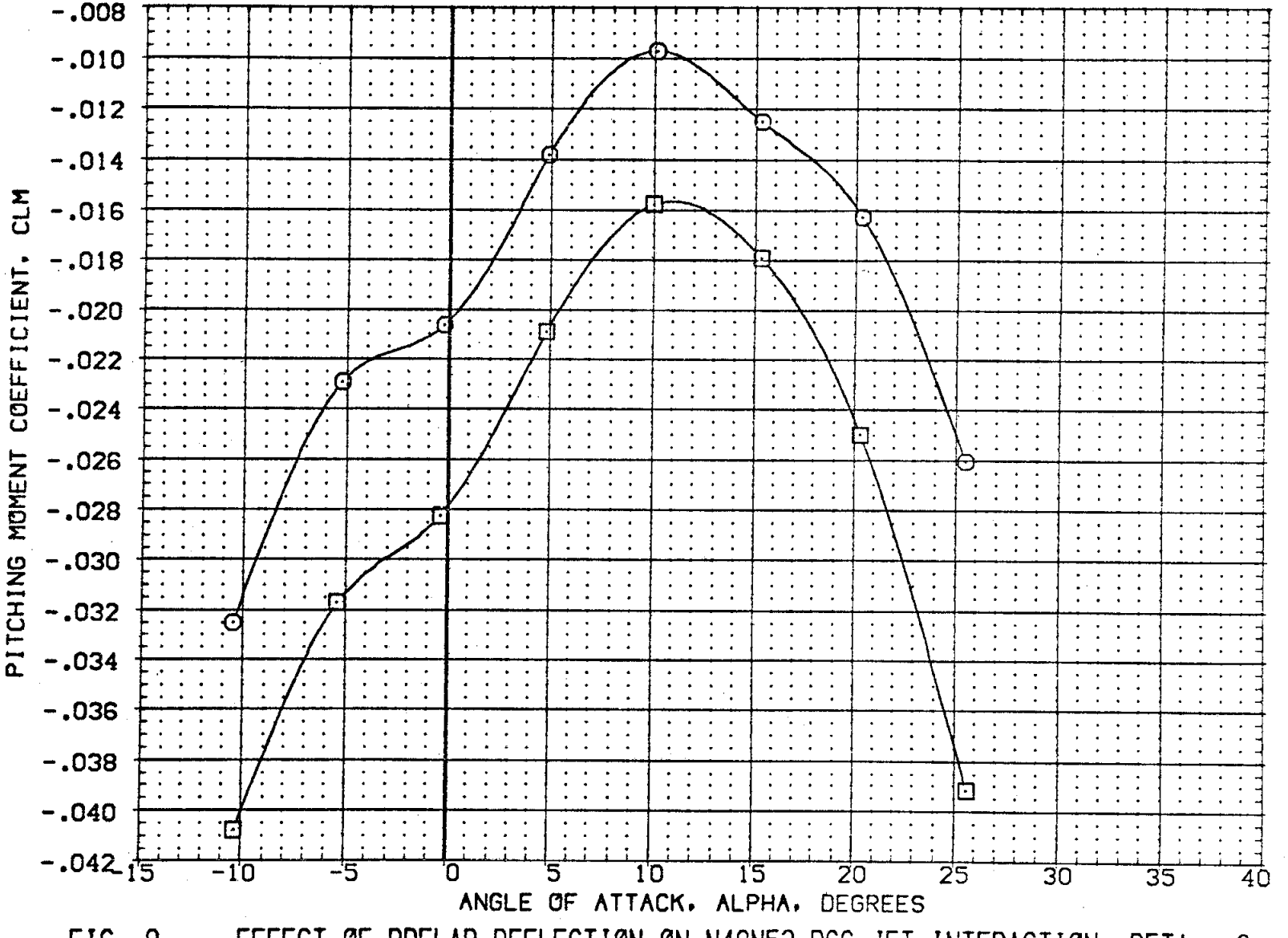


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH204N) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	13.750	62.000	.000	50.000
(ZH201F) □	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

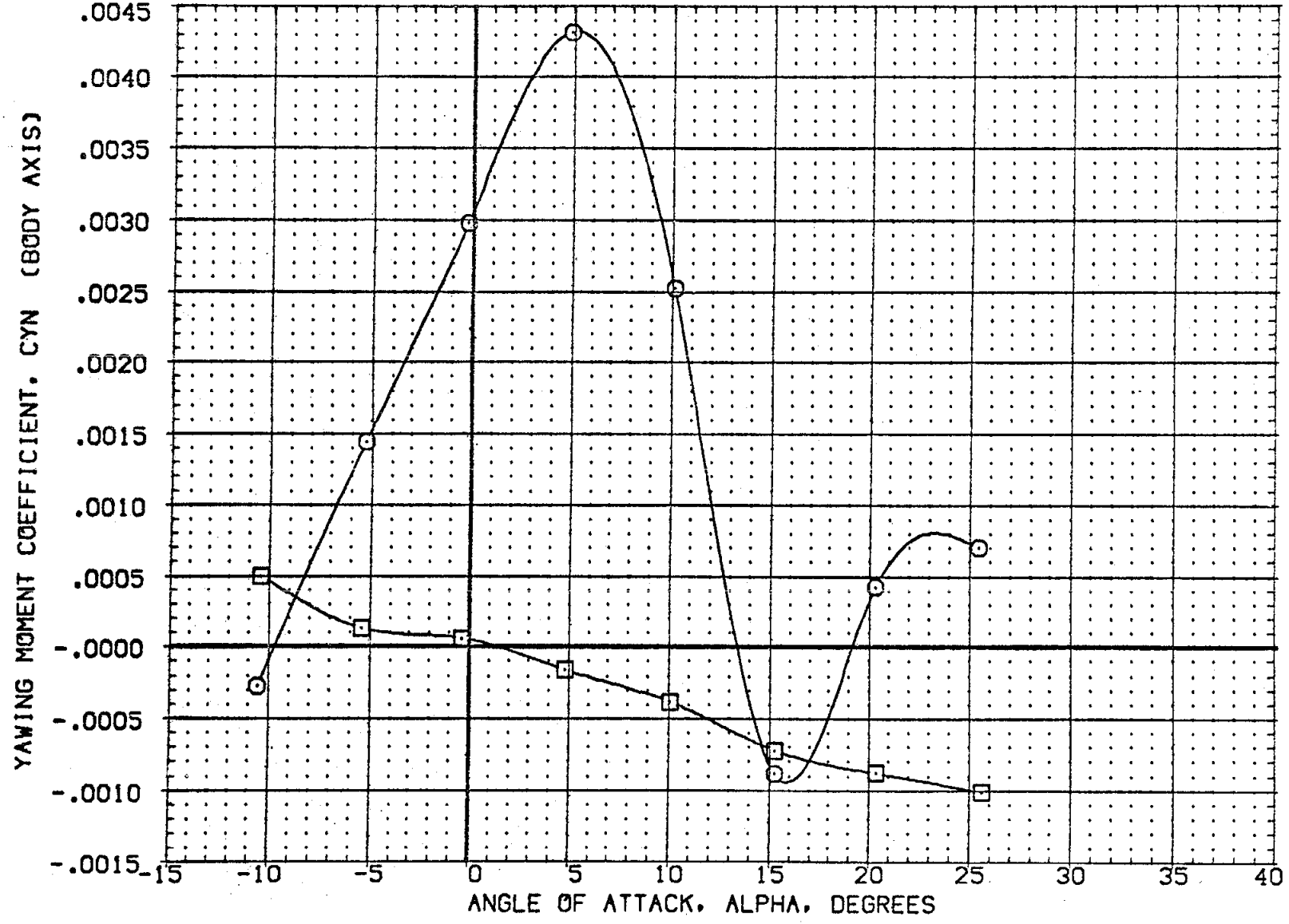


FIG 9 EFFECT OF BDFLAP DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

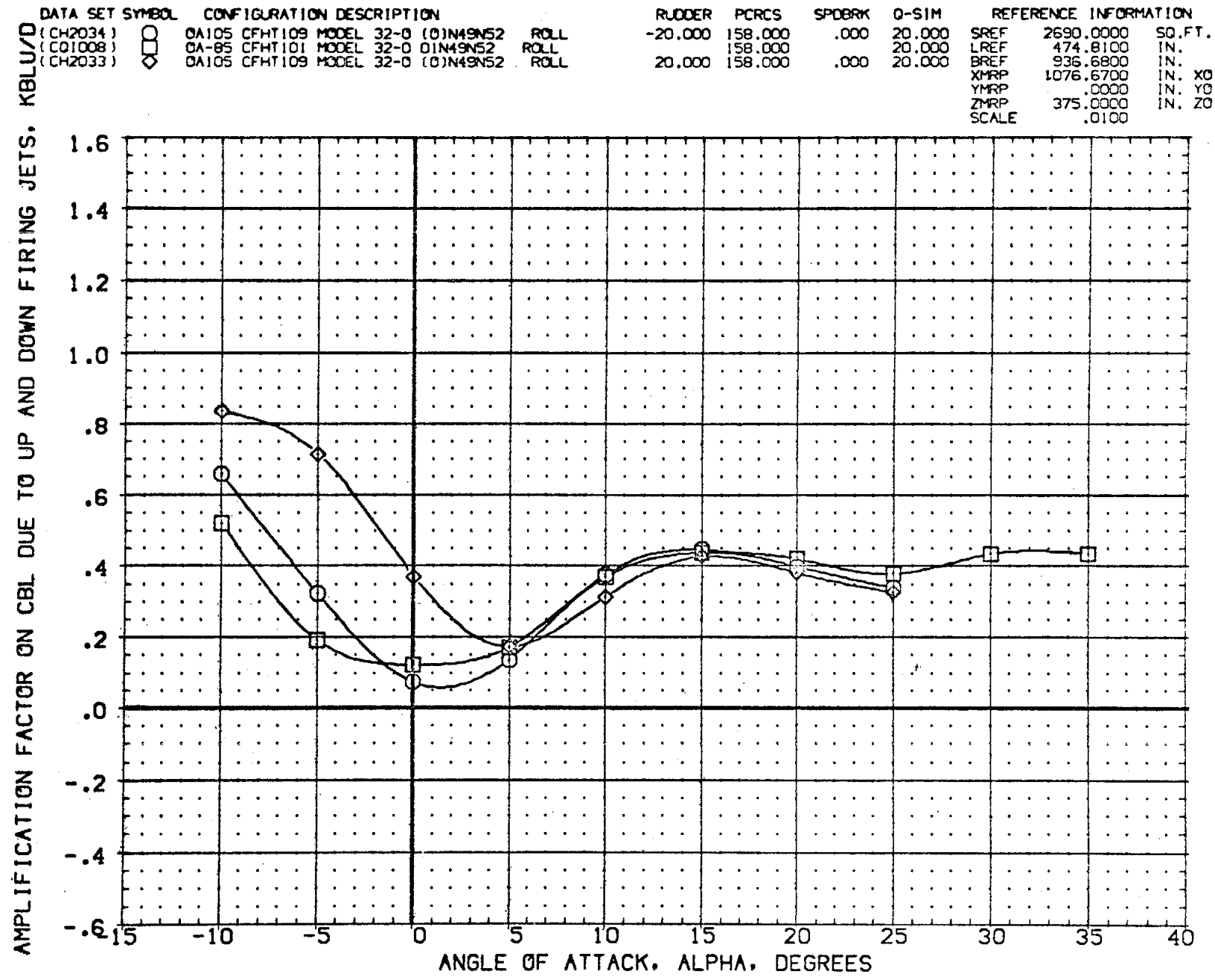


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2034)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(C01008)	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000		20.000
(CH2033)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2034) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(CQ1008) □	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000		20.000
(CH2033) ◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

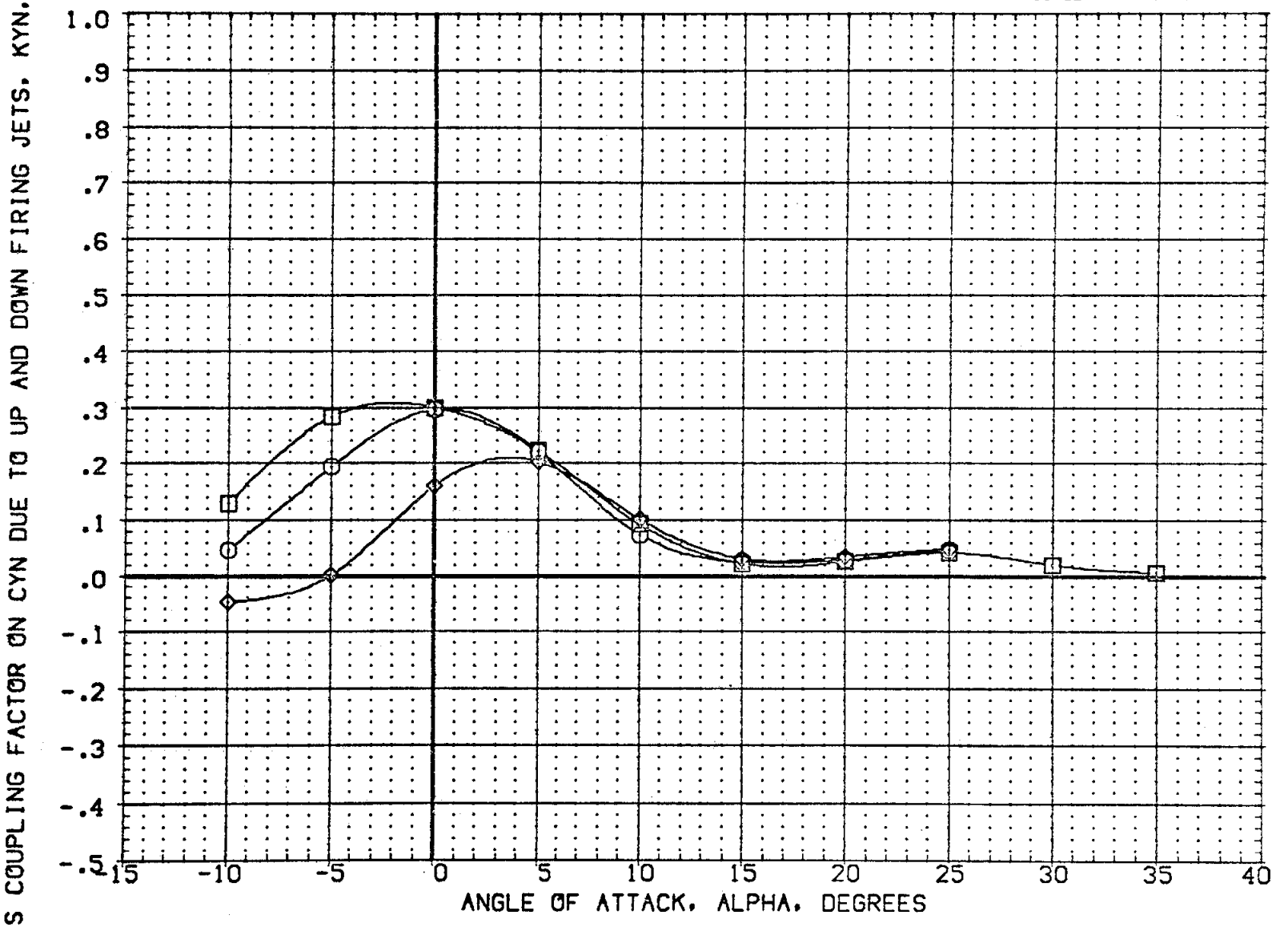


FIG 10 EFFECT ØF RUDDER DEFLECTIØN ØN N49N52 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPOBRK	Q-SIM
(CH2034)	○	0A105 CFHT105 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000		20.000
(CH2033)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

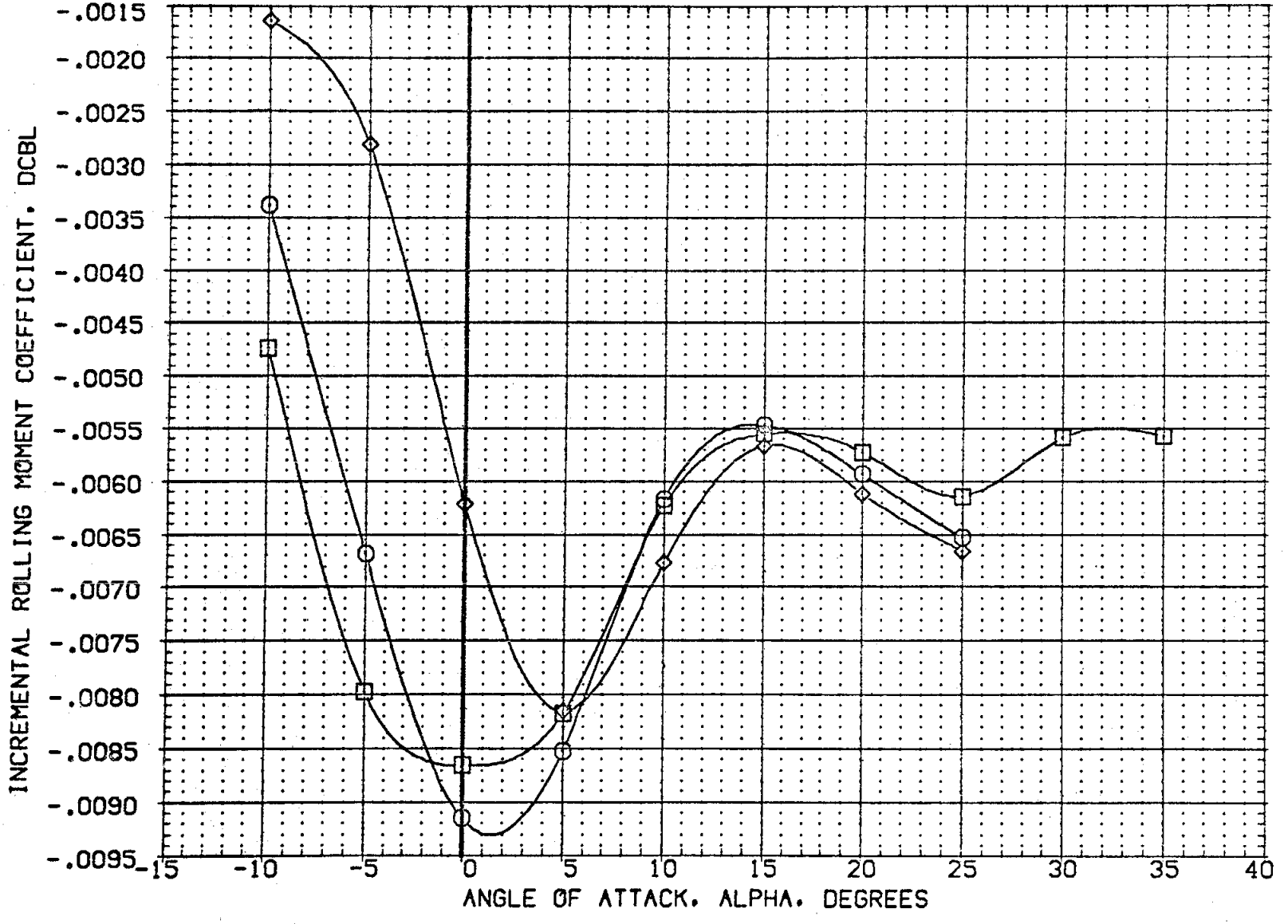


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2034)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 01N49N52	ROLL		158.000		20.000
(CH2033)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

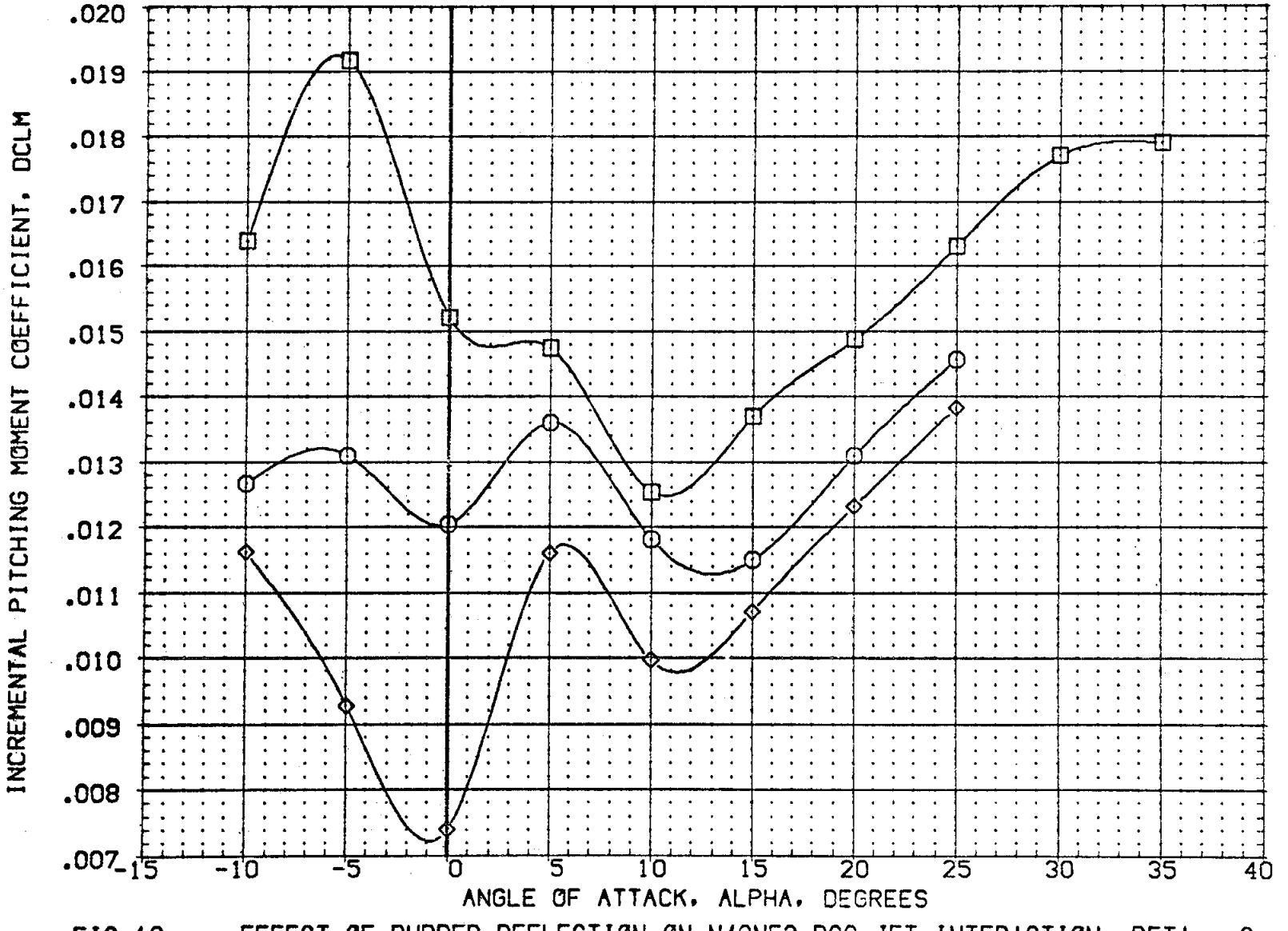


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2034)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(CQ1008)	□	0A-85 CFHT101 MODEL 32-0 0IN49N52	ROLL		158.000		20.000
(CH2033)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

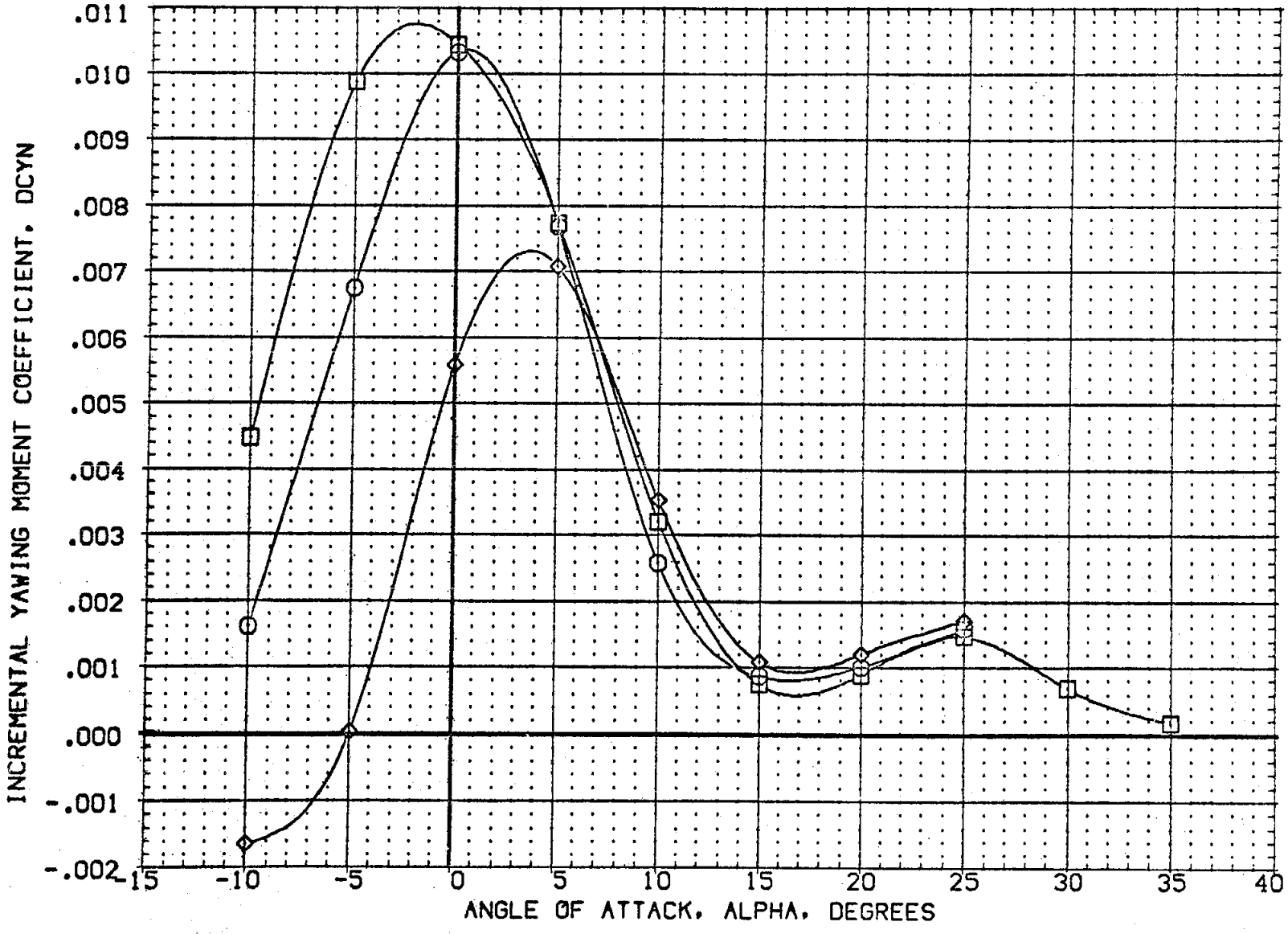


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	0-SIM
(ZH234N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(ZQ108F)	0A-85 CFHT101 MODEL 32-0 01 N46 N47	RCS OFF		.000		.000
(ZH233N)	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000
(ZH210F)	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-20.000	.000	.000	.000
(ZQ103F)	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF		.000		.000
(ZH209F)	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	20.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

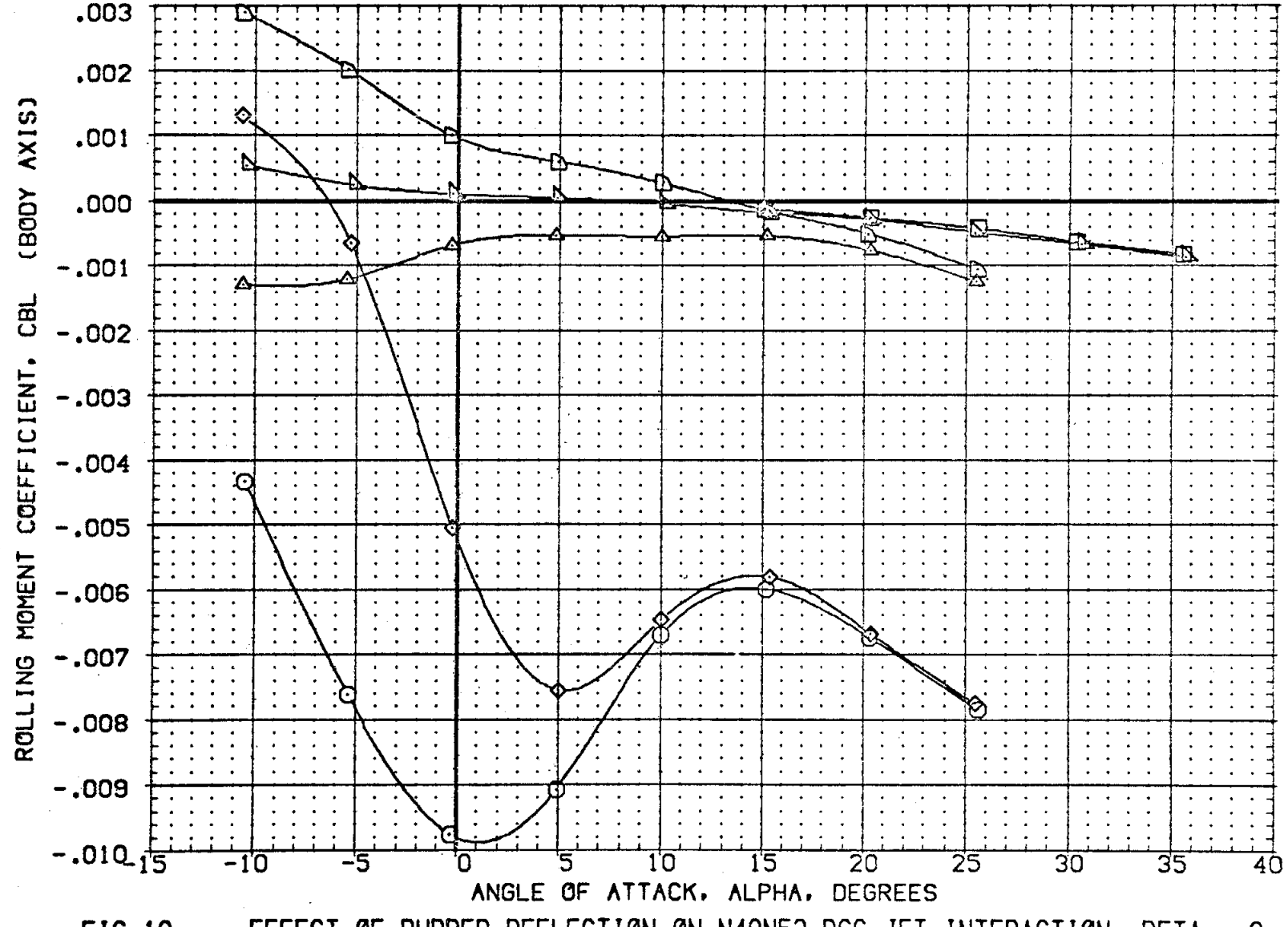


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	O-SIM	REFERENCE INFORMATION		
(ZH234N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000	SREF	2690.0000	SQ.FT.
(ZQ108F)	□	0A-85 CFHT101 MODEL 32-0 01 N46 N47	RCS OFF		.000		.000	LREF	474.8100	IN.
(ZH233N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000	BREF	936.6800	IN.
(ZH210F)	△	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-20.000	.000	.000	.000	XMRP	1076.6700	IN. XO
(ZQ103F)	▽	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF		.000		.000	YMRP	.0000	IN. YO
(ZH209F)	▷	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	20.000	.000	.000	.000	ZMRP	375.0000	IN. ZO
								SCALE	.0100	

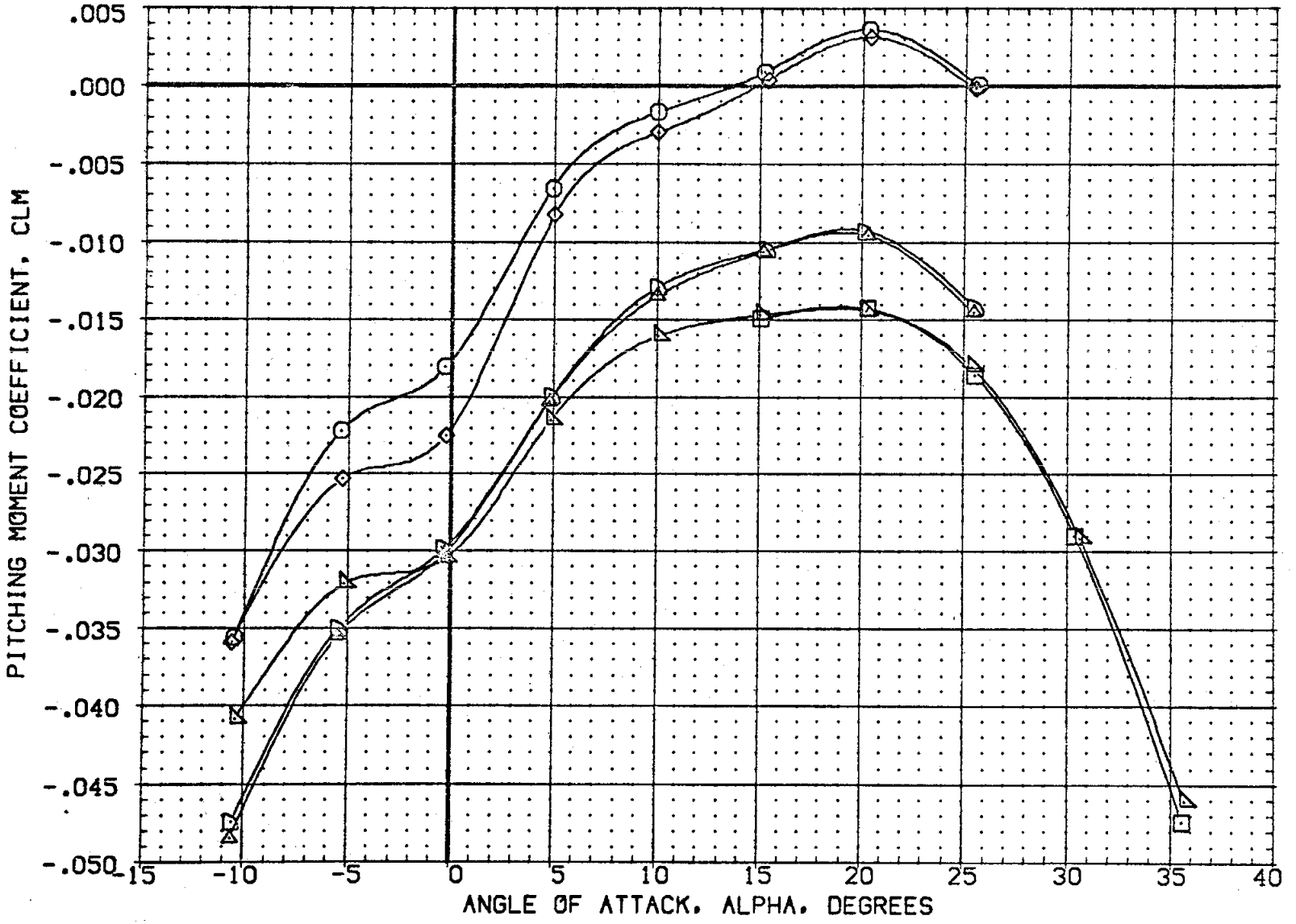


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(ZH234N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	-20.000	158.000	.000	20.000
(ZQ108F)	□	0A-85 CFHT101 MODEL 32-0 01 N46 N47	RCS OFF		.000		.000
(ZH233N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	20.000	158.000	.000	20.000
(ZH210F)	△	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	-20.000	.000	.000	.000
(ZQ103F)	▷	0A-85 CFHT101 MODEL 32-0 01 N52	RCS OFF		.000		.000
(ZH209F)	▽	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	20.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

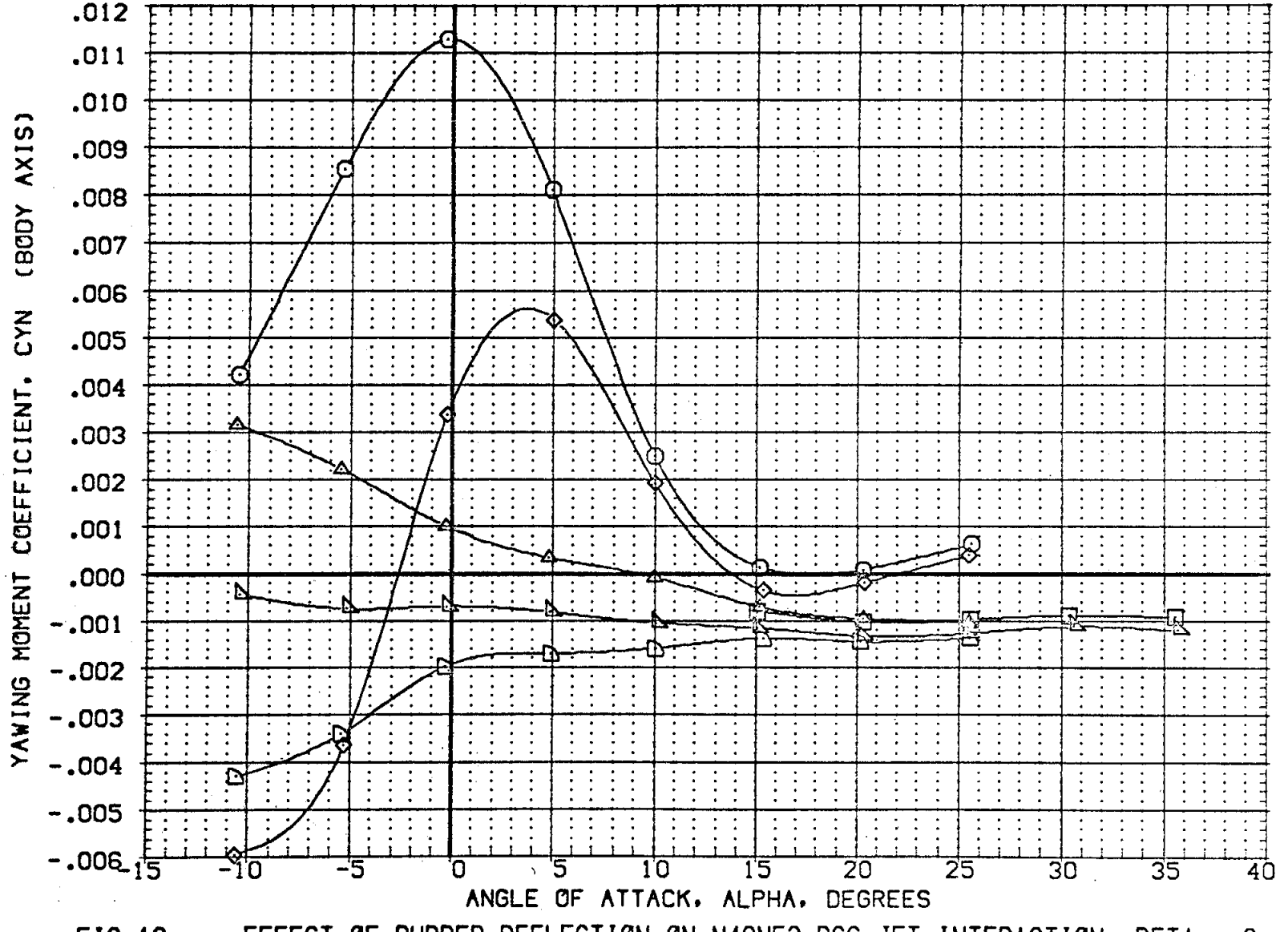


FIG 10 EFFECT OF RUDDER DEFLECTION ON N49N52 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

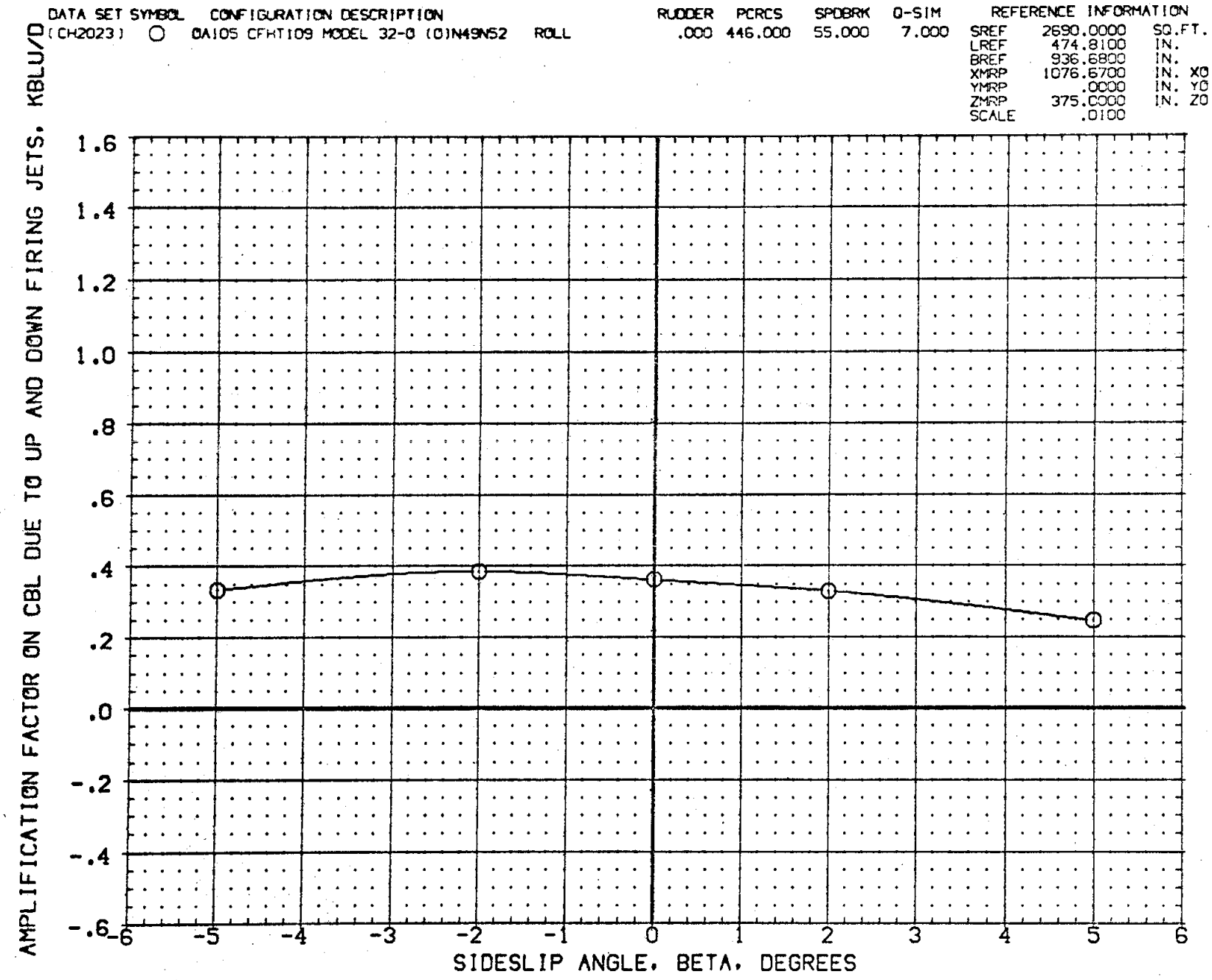


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2023) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	.000	446.000	55.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

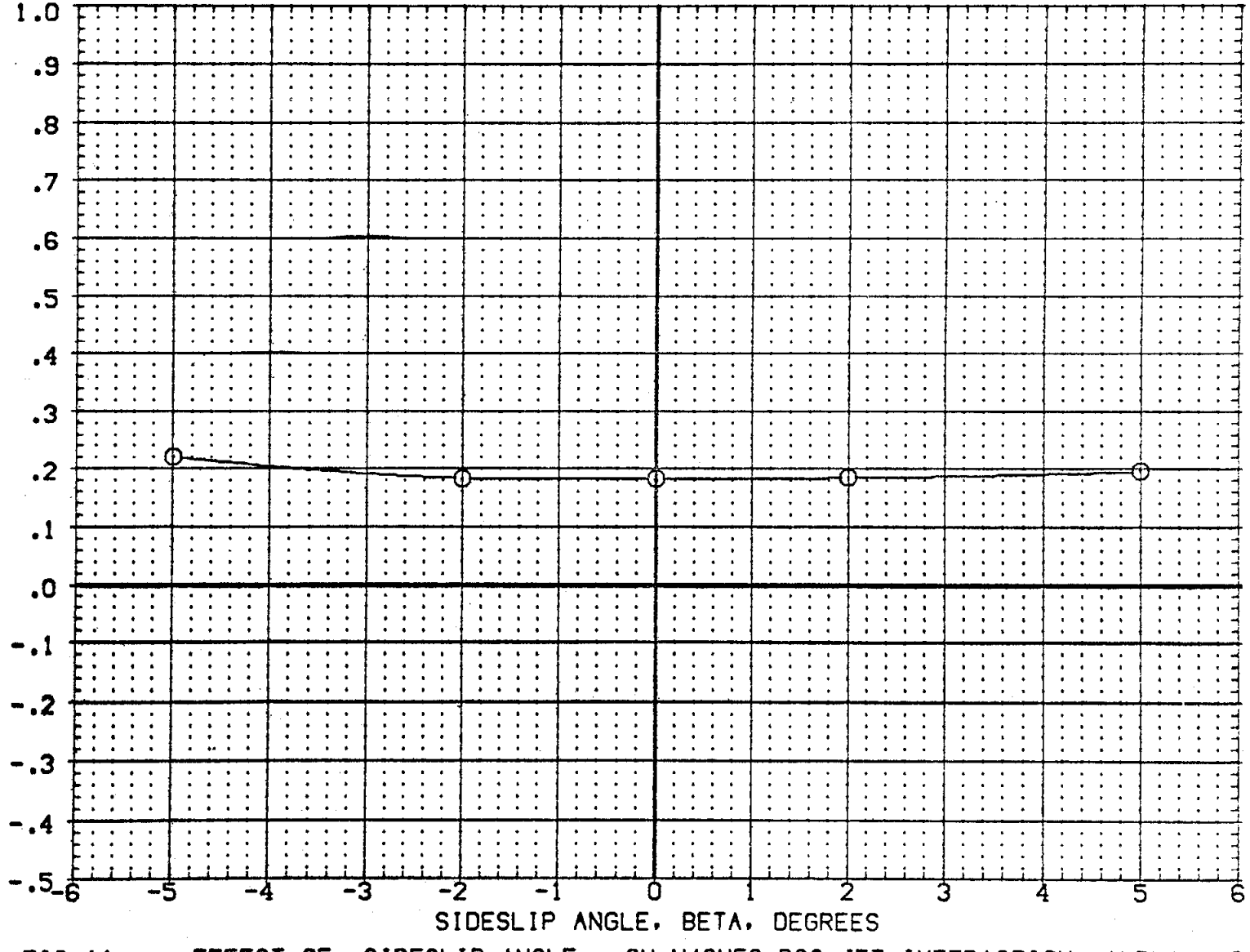


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2023) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	.000	446.000	55.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

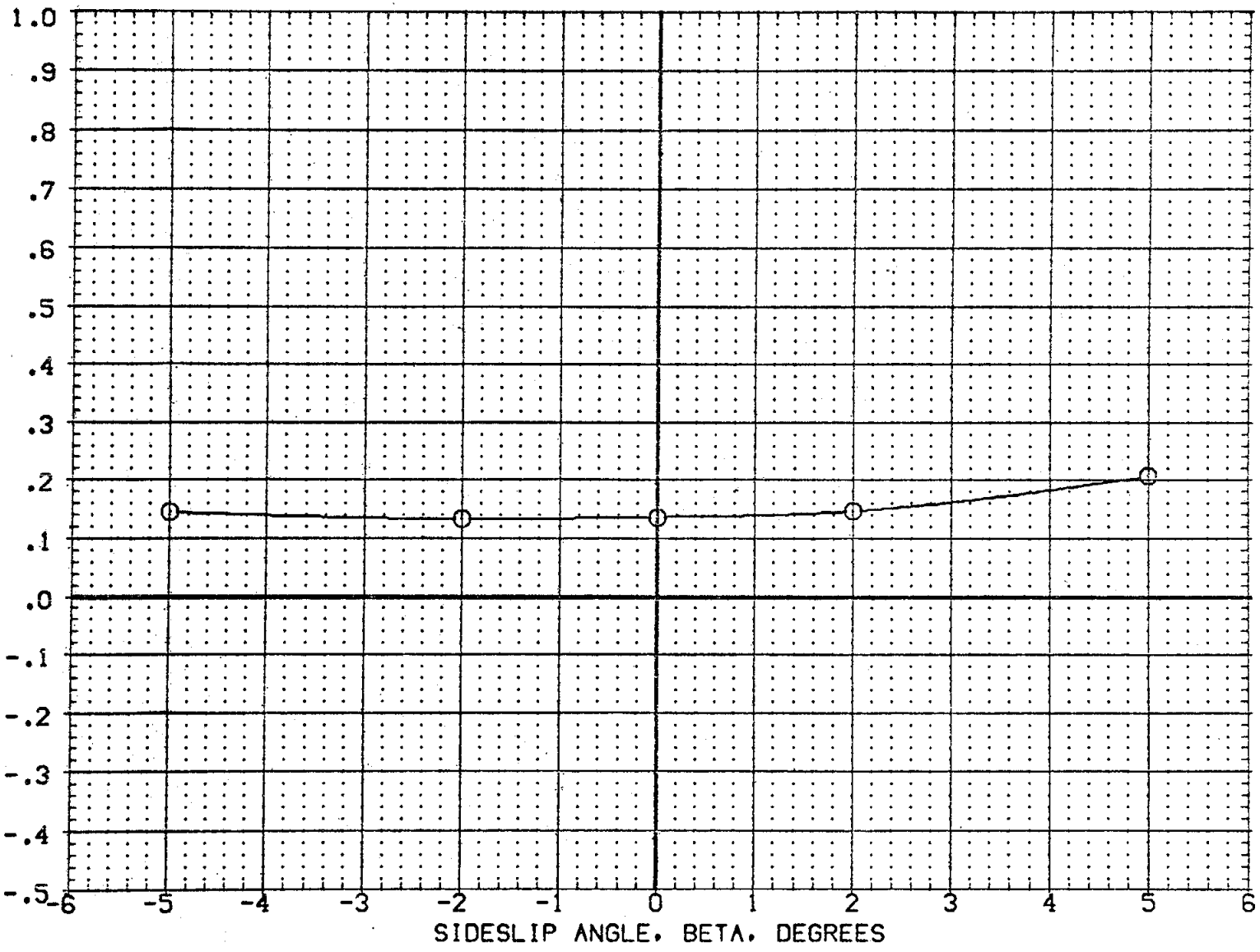


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2023) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	.000	446.000	55.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2023) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	.000	446.000	55.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

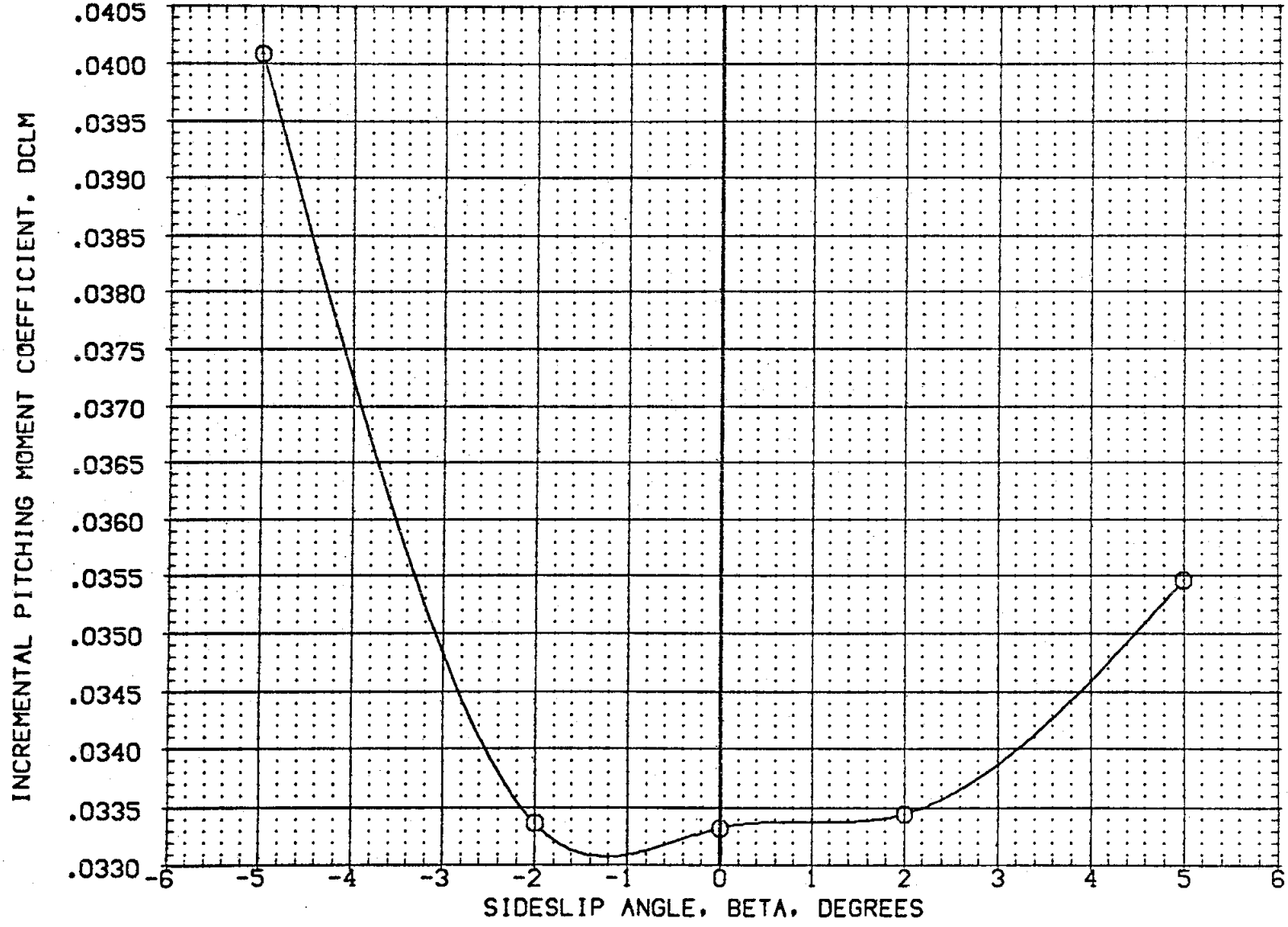


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	RUDDER	PCRCS	SPDBRK	Q-SIM
(CH2023) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52 ROLL	.000	446.000	55.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

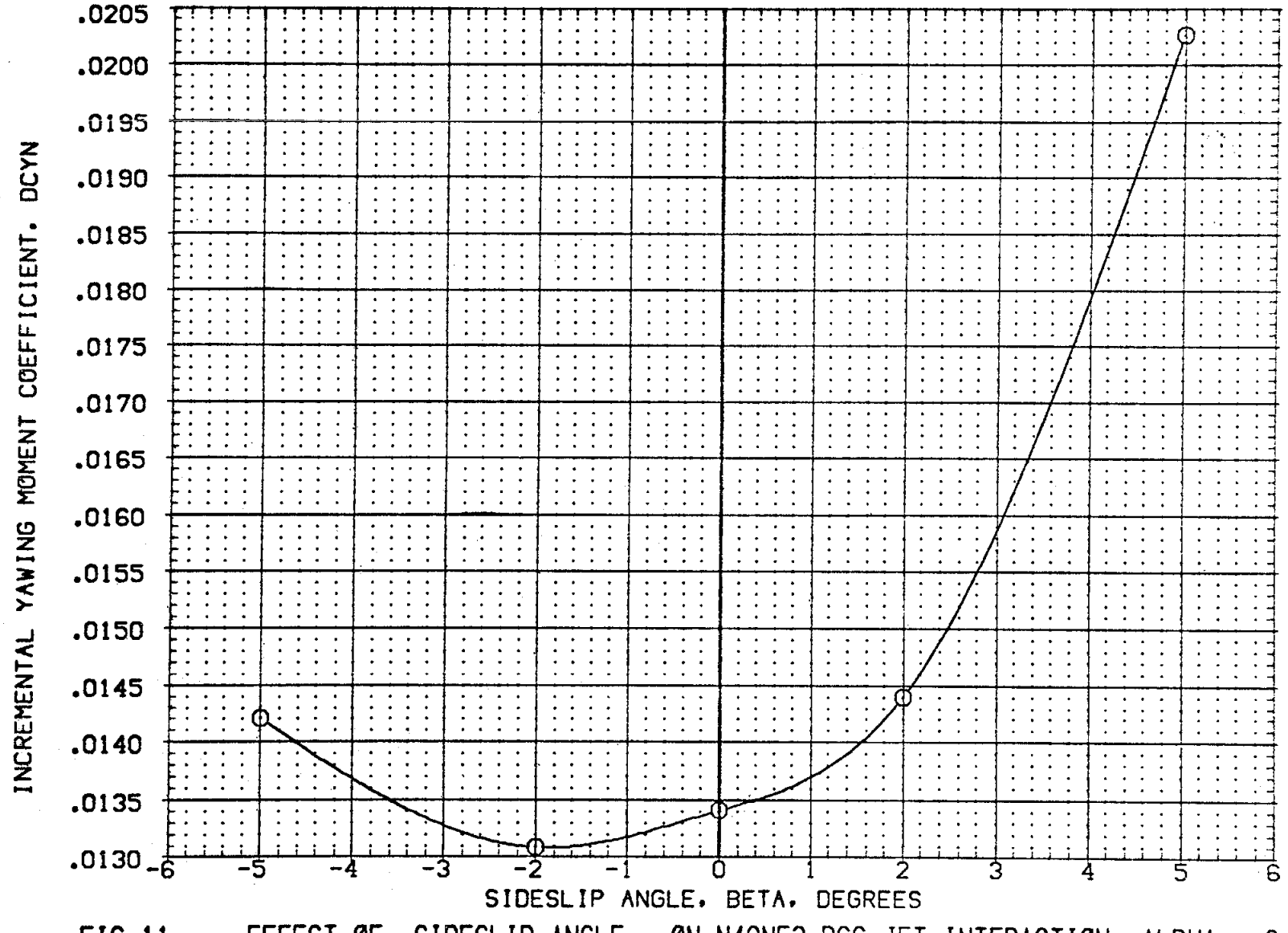


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(ZH223N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	55.000	7.000
(ZH204F)	□	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	.000	.000	55.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

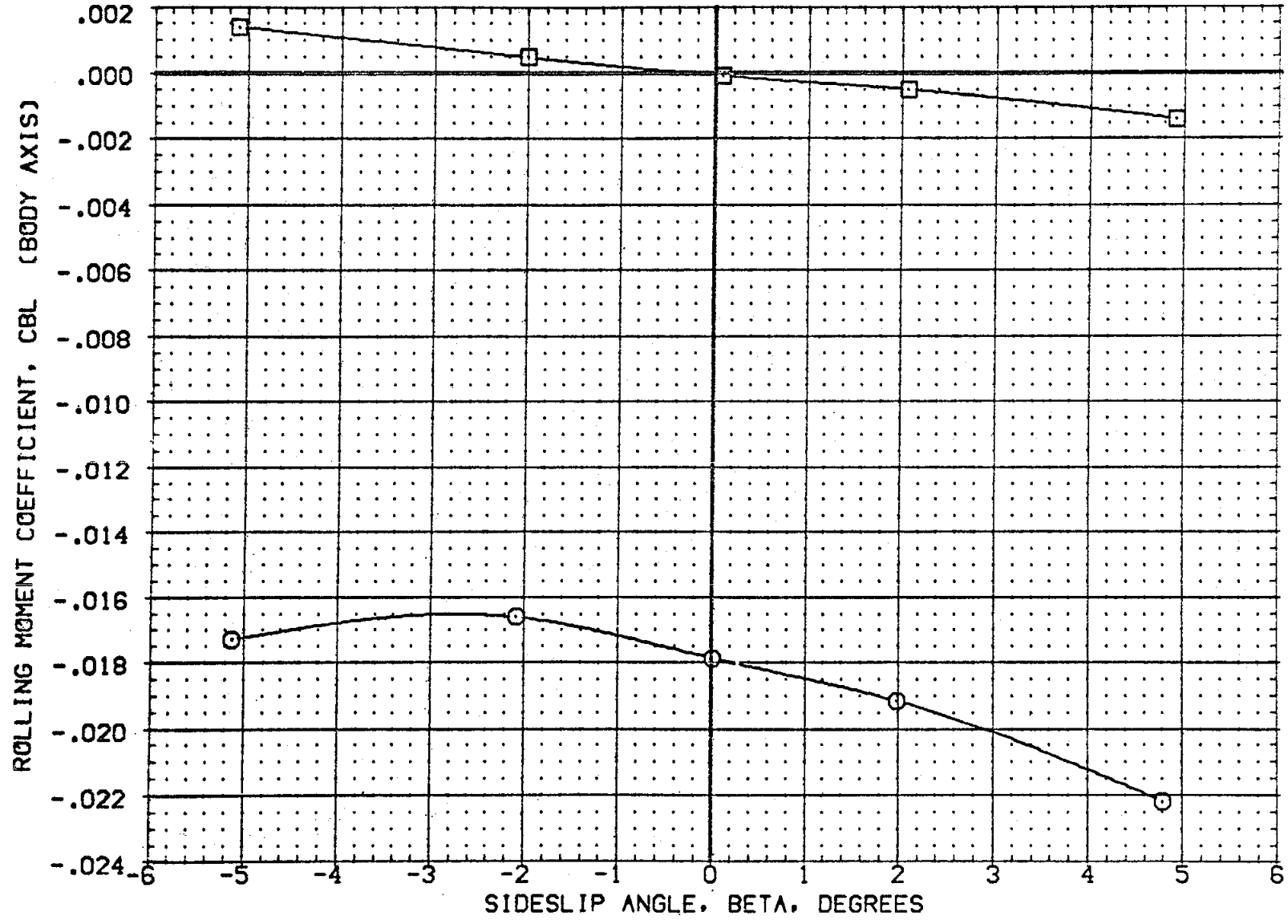


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(ZH223N) ○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	55.000	7.000
(ZH204F) □	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	.000	.000	55.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

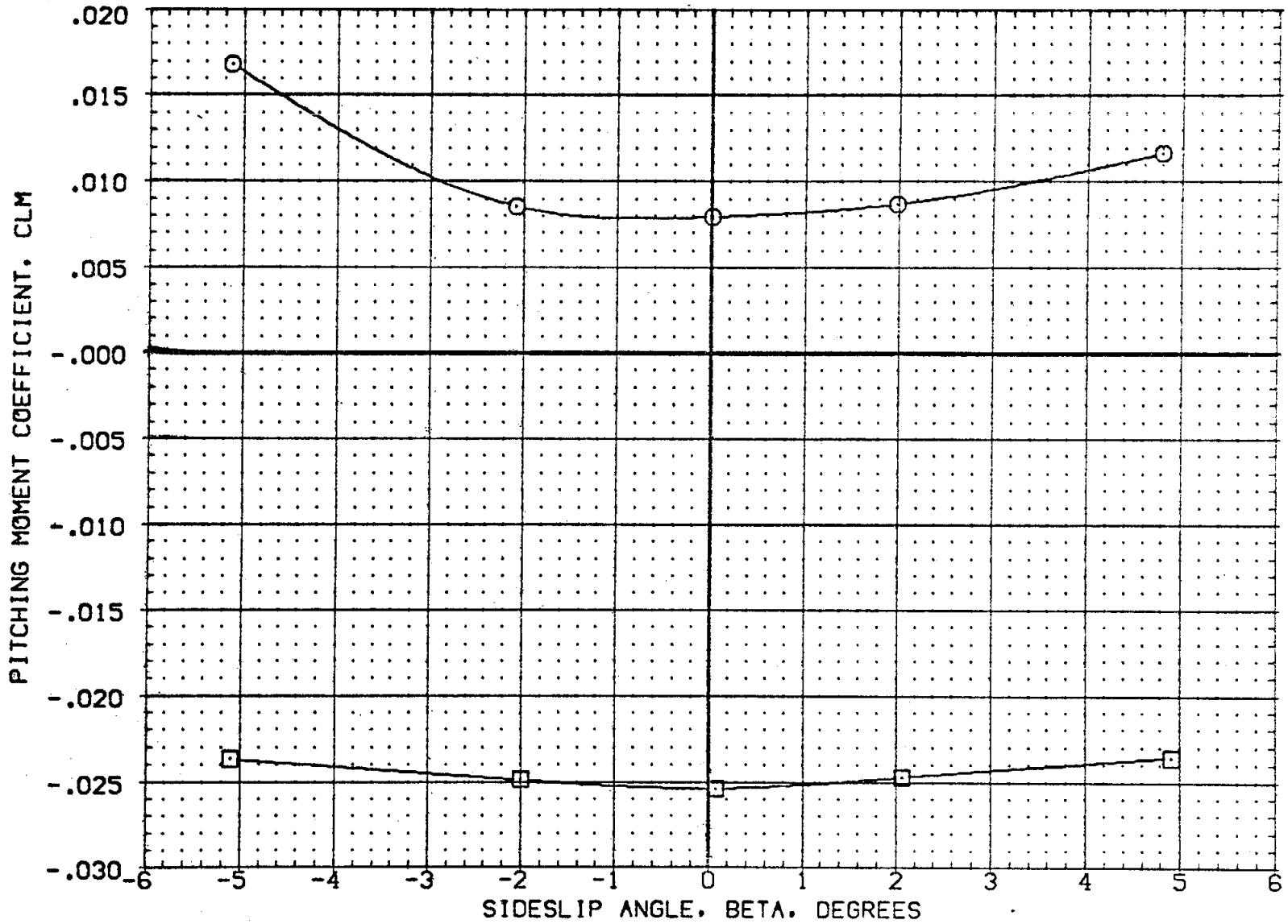


FIG 11 EFFECT OF SIDESLIP ANGLE ON N49N52 RCS JET INTERACTION, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		RUDDER	PCRCS	SPDBRK	Q-SIM
(ZH223N)	○	0A105 CFHT109 MODEL 32-0 (0)N49N52	ROLL	.000	446.000	55.000	7.000
(ZH204F)	□	0A105 CFHT109 MODEL 32 0(0) NN49N52	RCS OFF	.000	.000	55.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

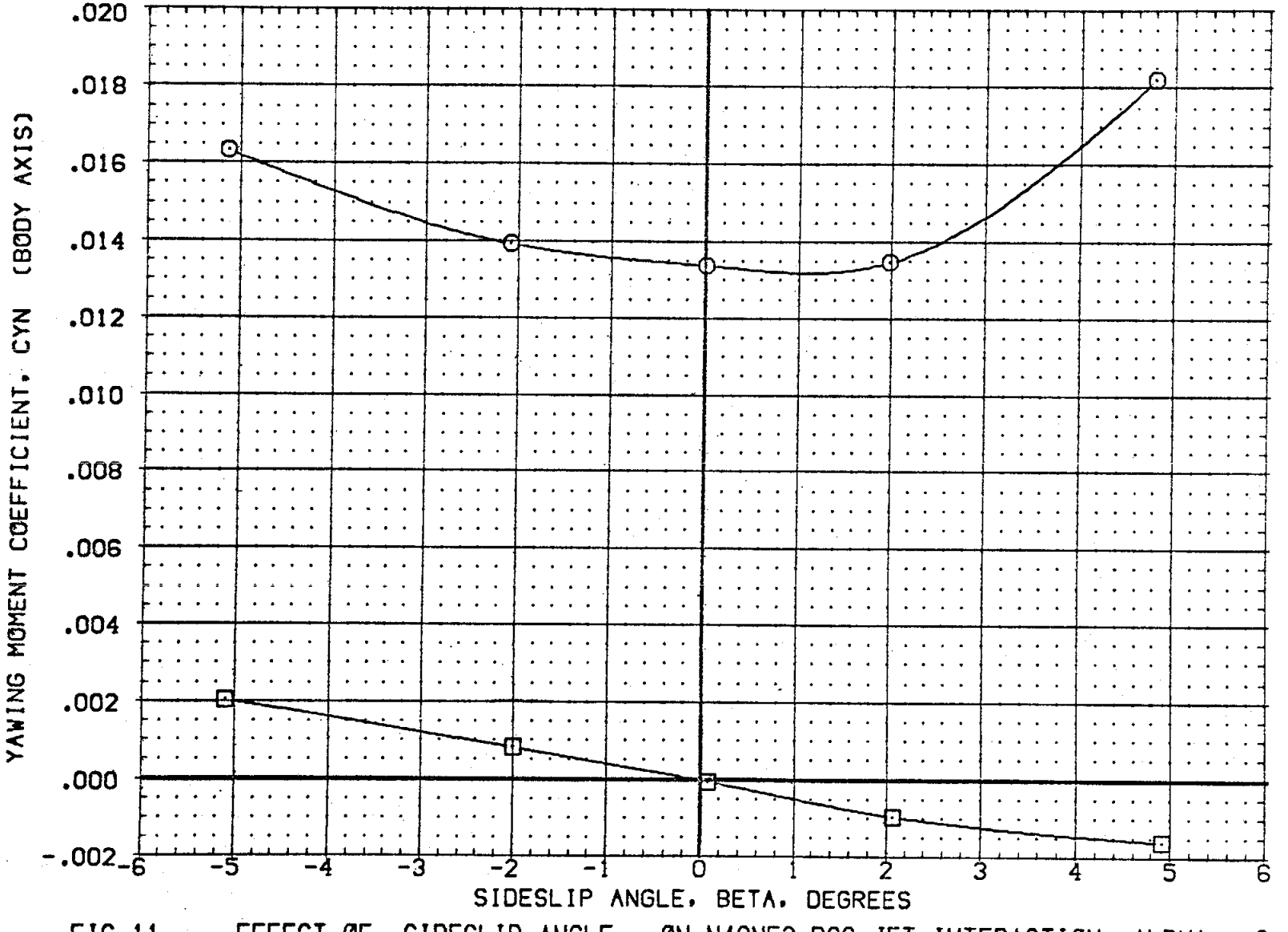


FIG 11 EFFECT ØF SIDESLIP ANGLE ØN N49N52 RCS JET INTERACTIØN, ALPHA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2030)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2030)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

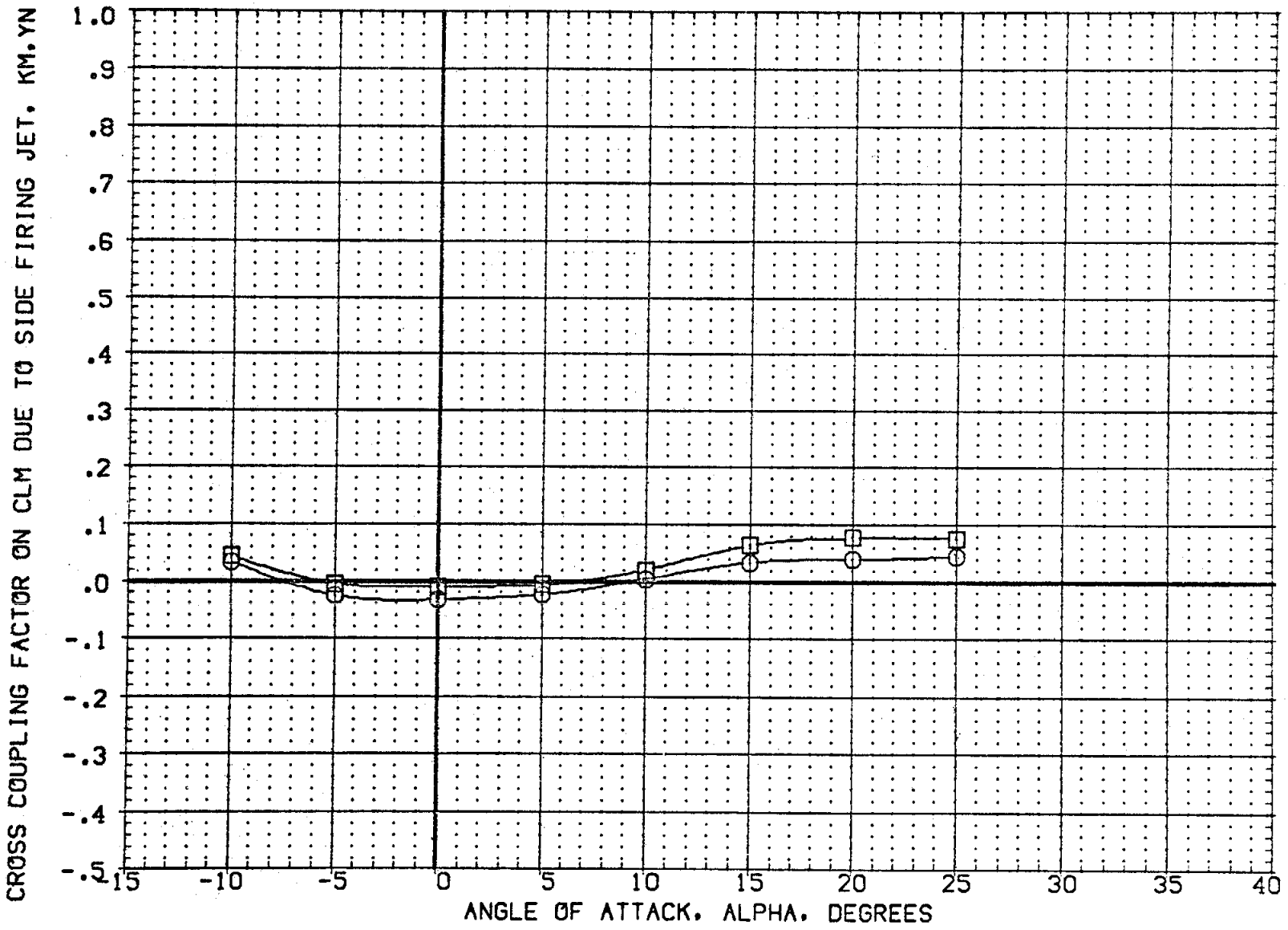


FIG 12 EFFECT ØF ELEVØN DEFLECTIØN ØN N51 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2030) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

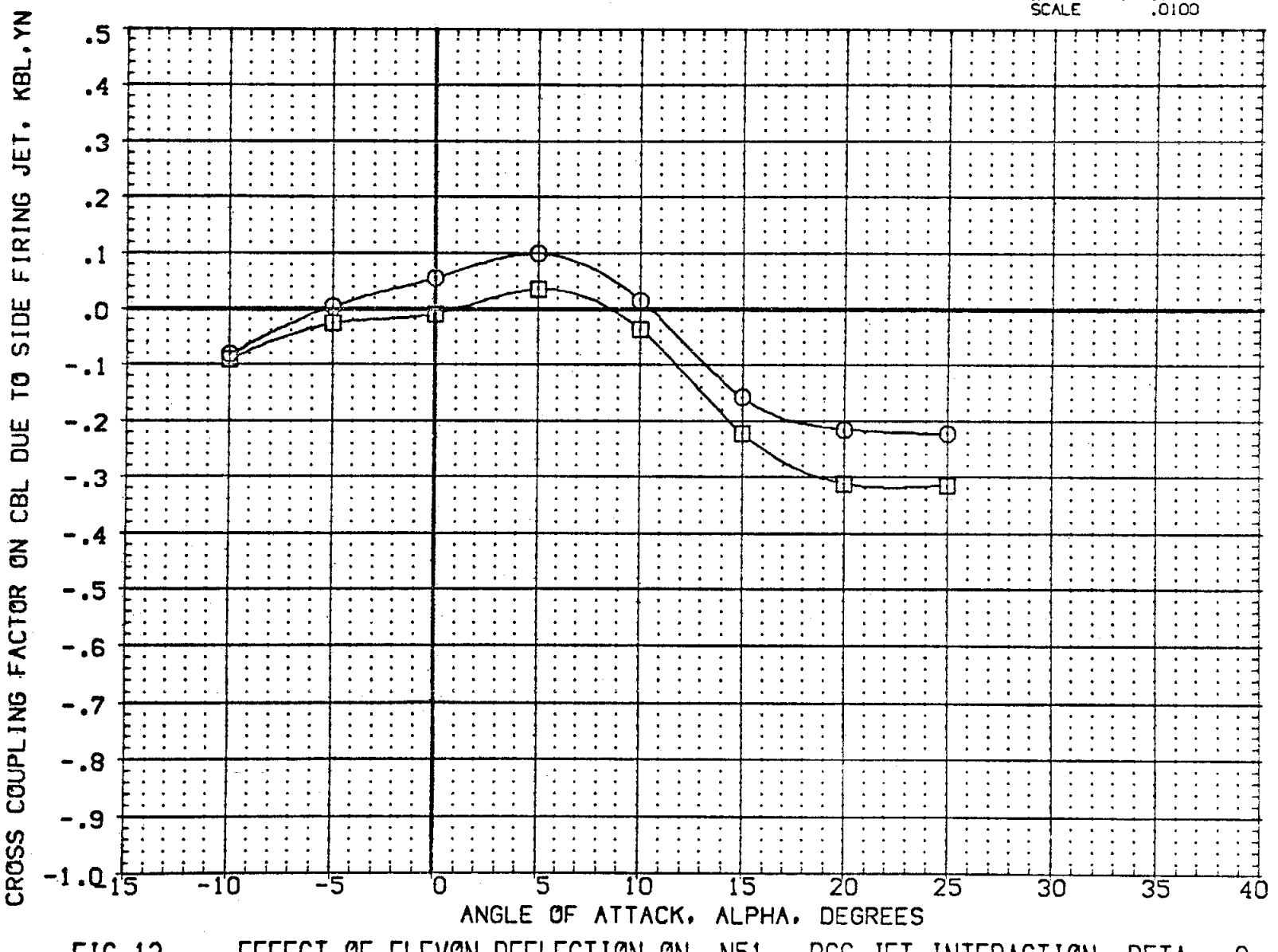


FIG 12 EFFECT ØF ELEVØN DEFLECTIØN ØN N51 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2030)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

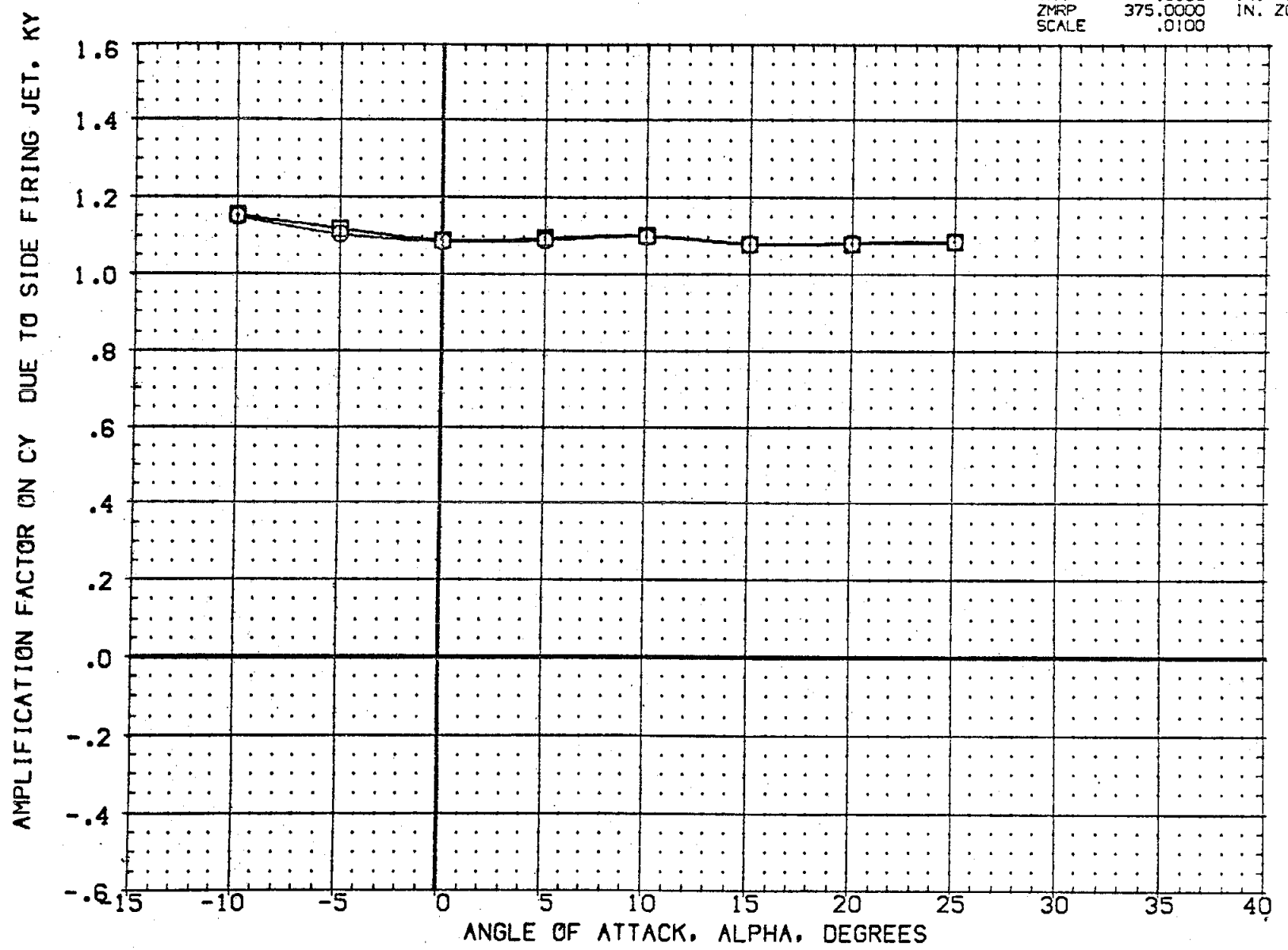


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2030) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

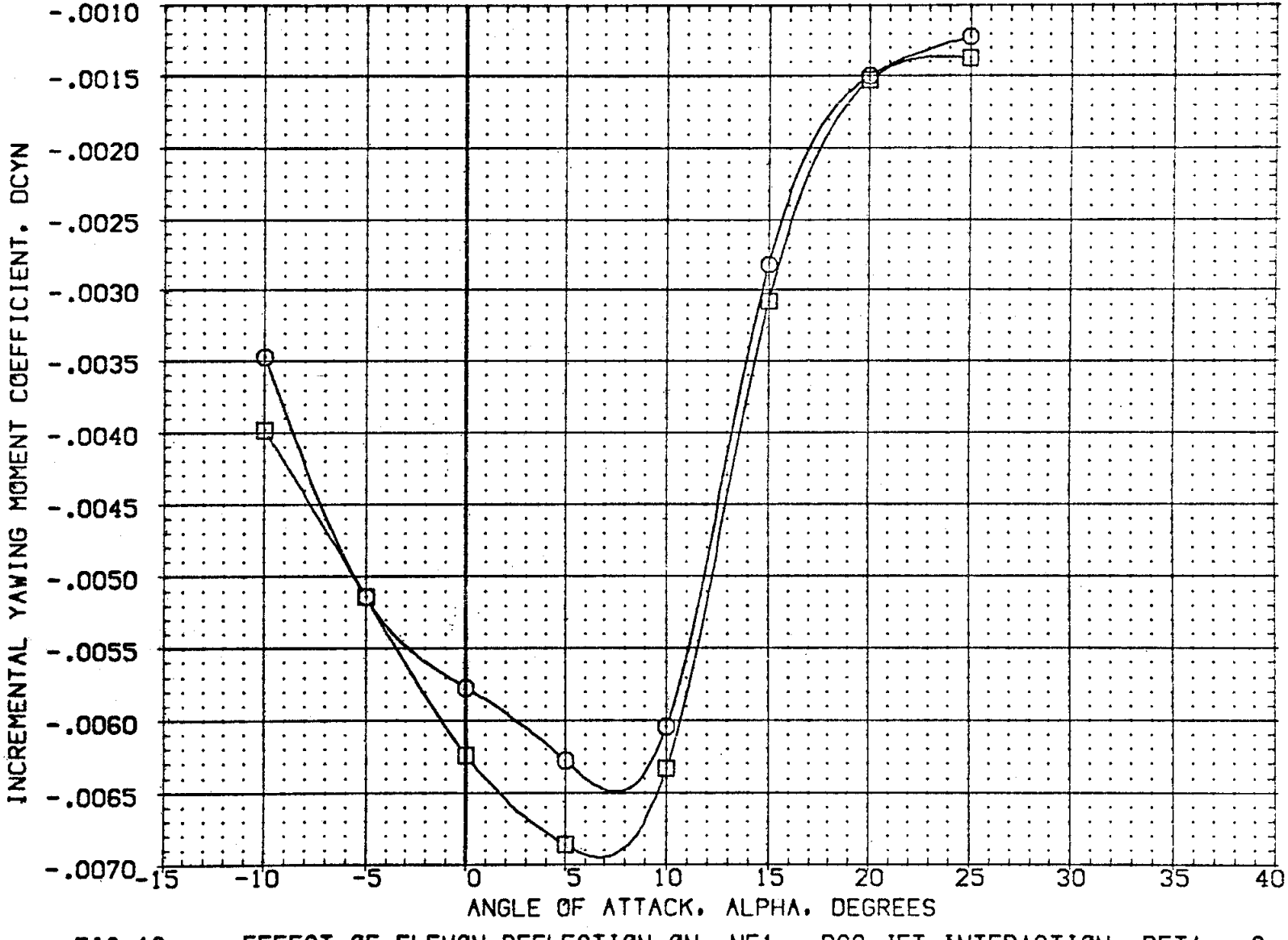


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2030) ○	OA105 CFHT.05 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021) □	OA105 CFHT.05 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

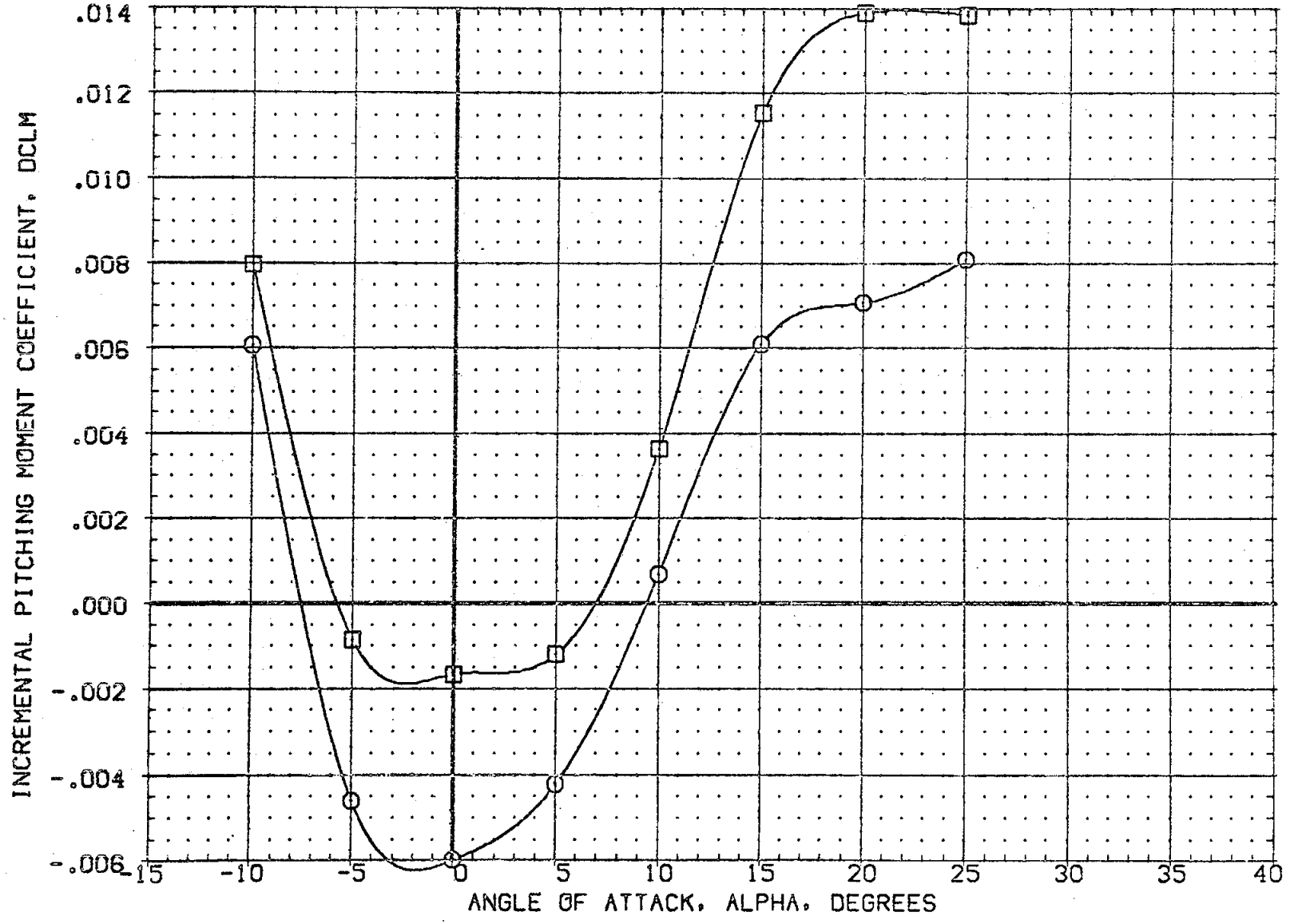


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2030) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

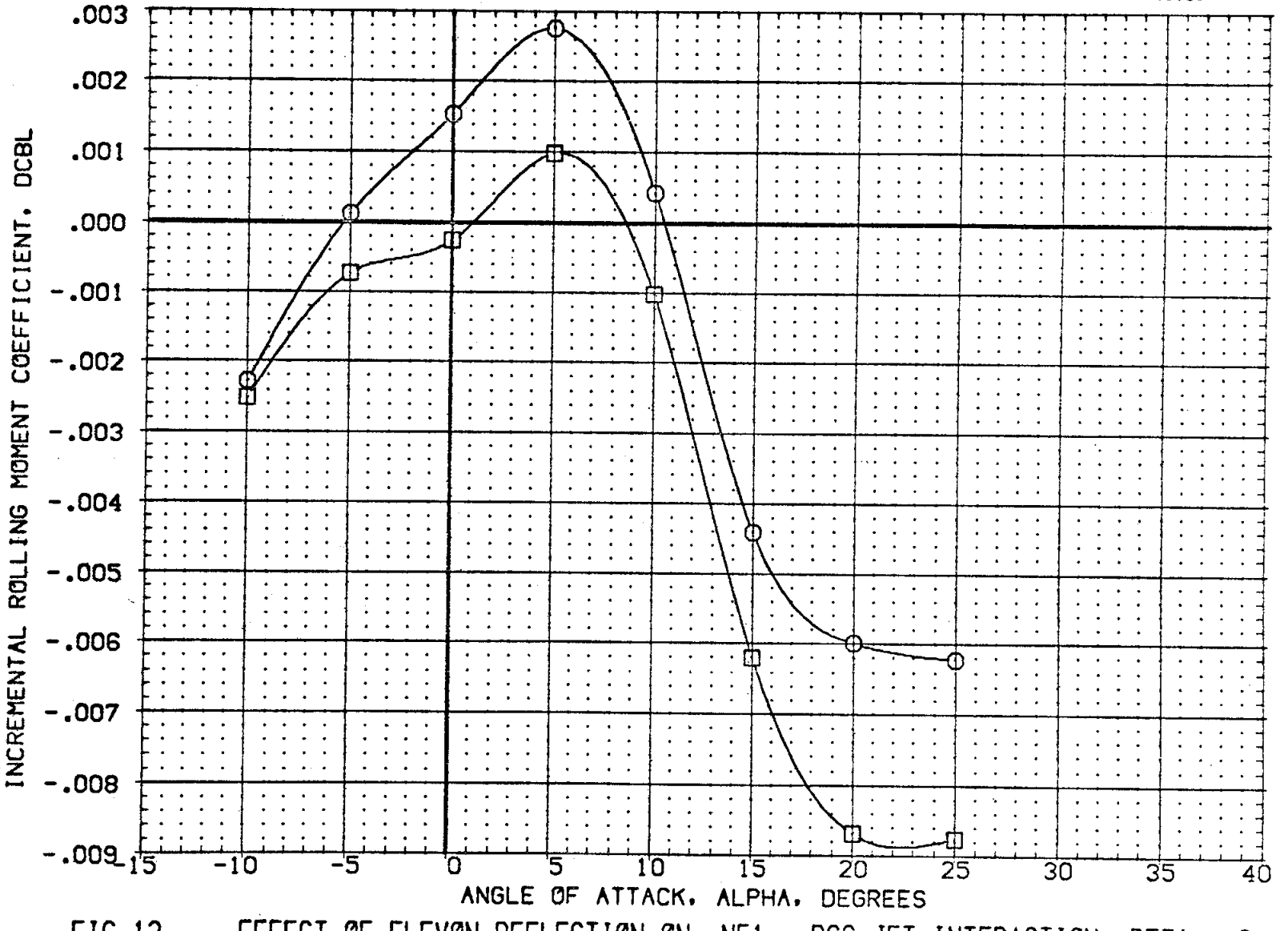


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2030)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

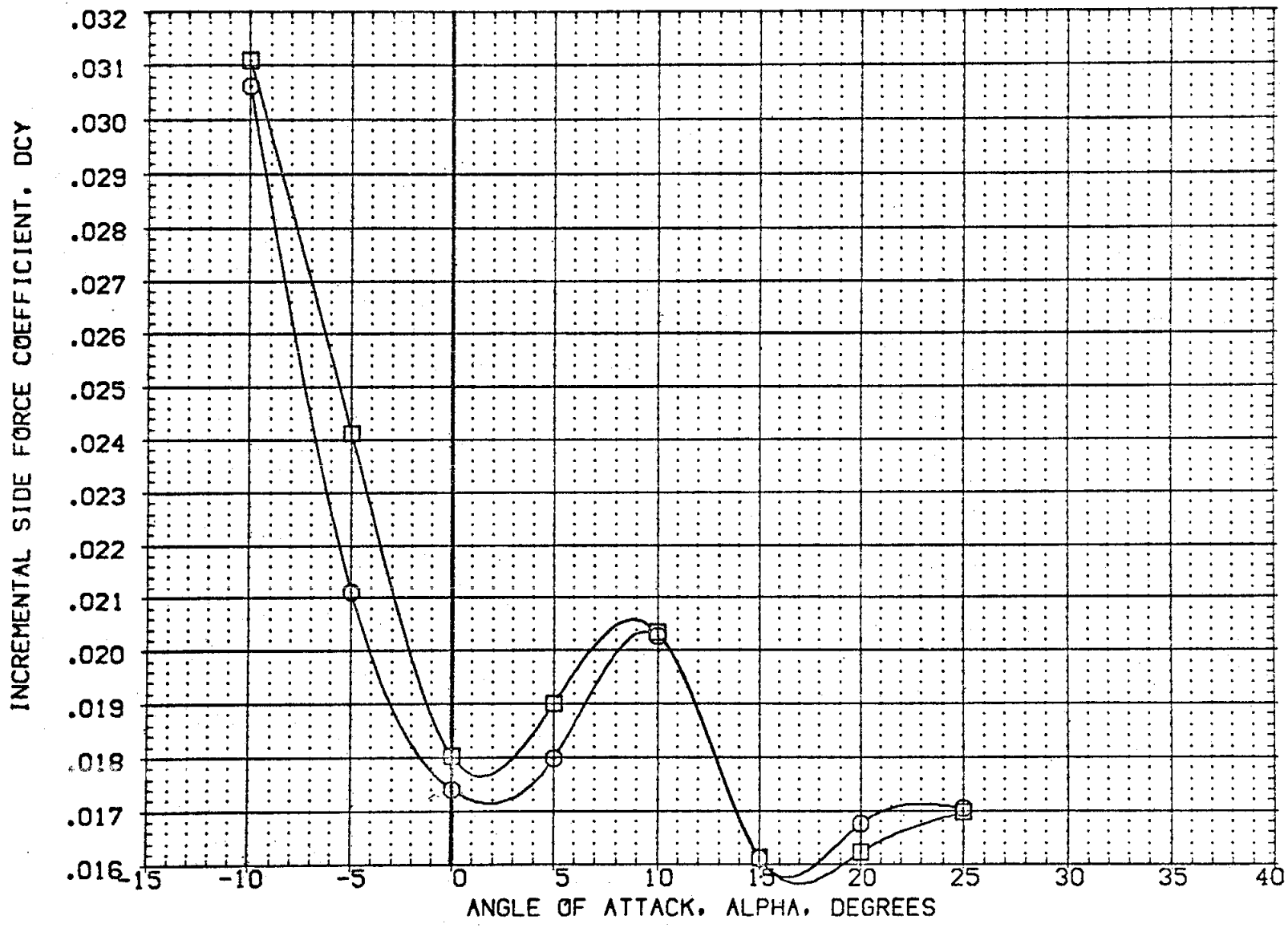


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH230N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(ZH221N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000
(ZH206F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

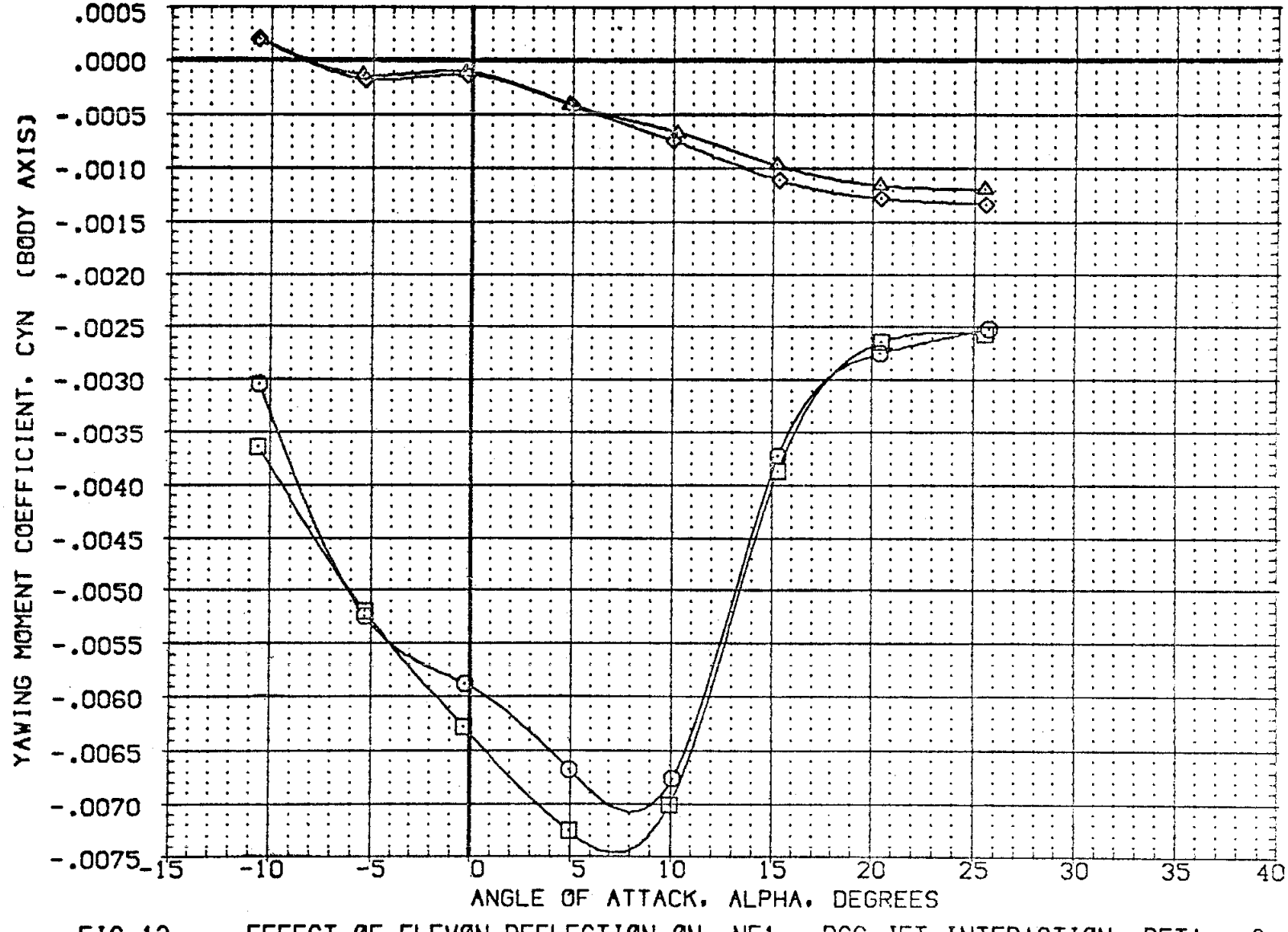


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH230N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(ZH221N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

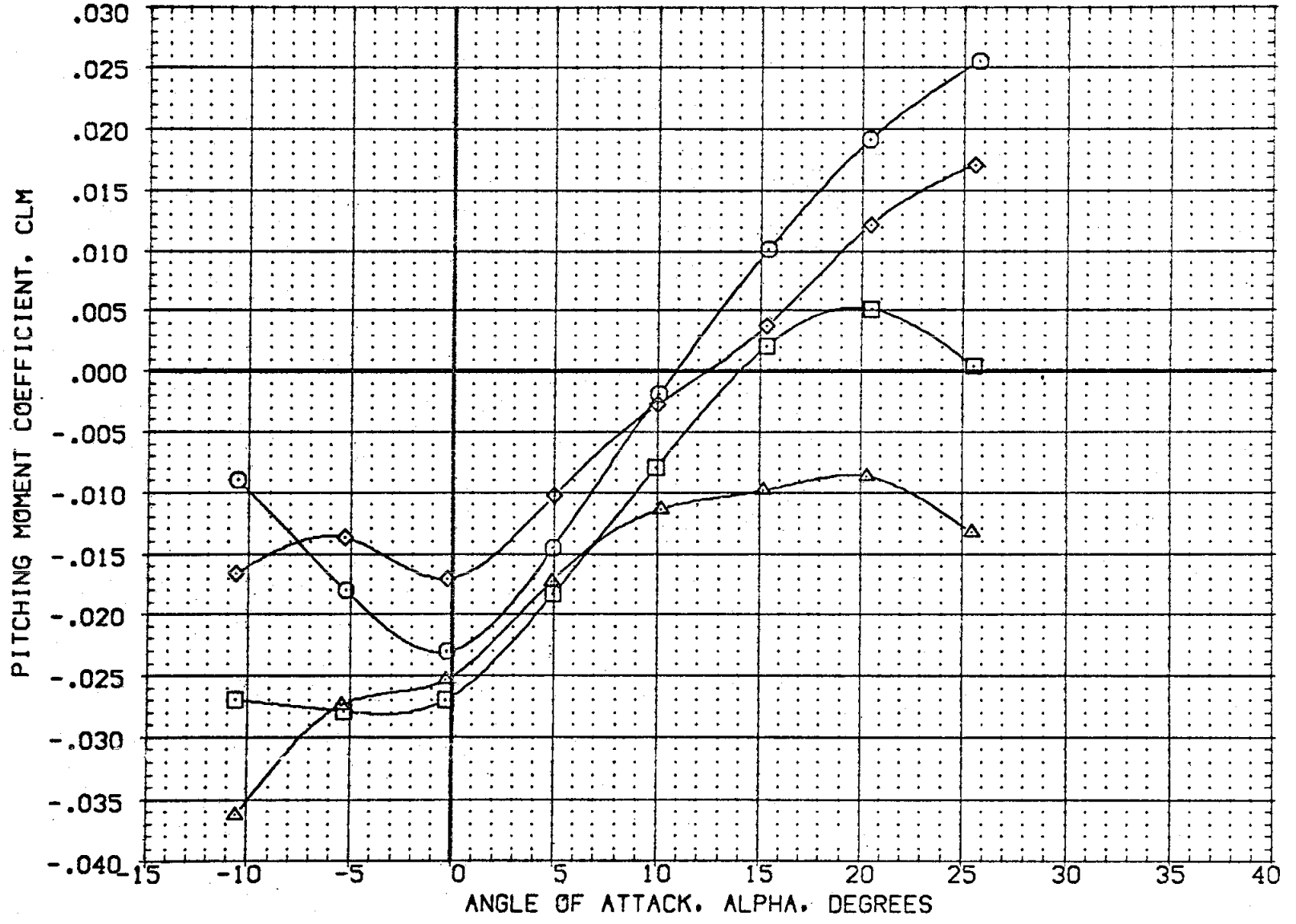


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH230N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(ZH221N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000
(ZH206F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

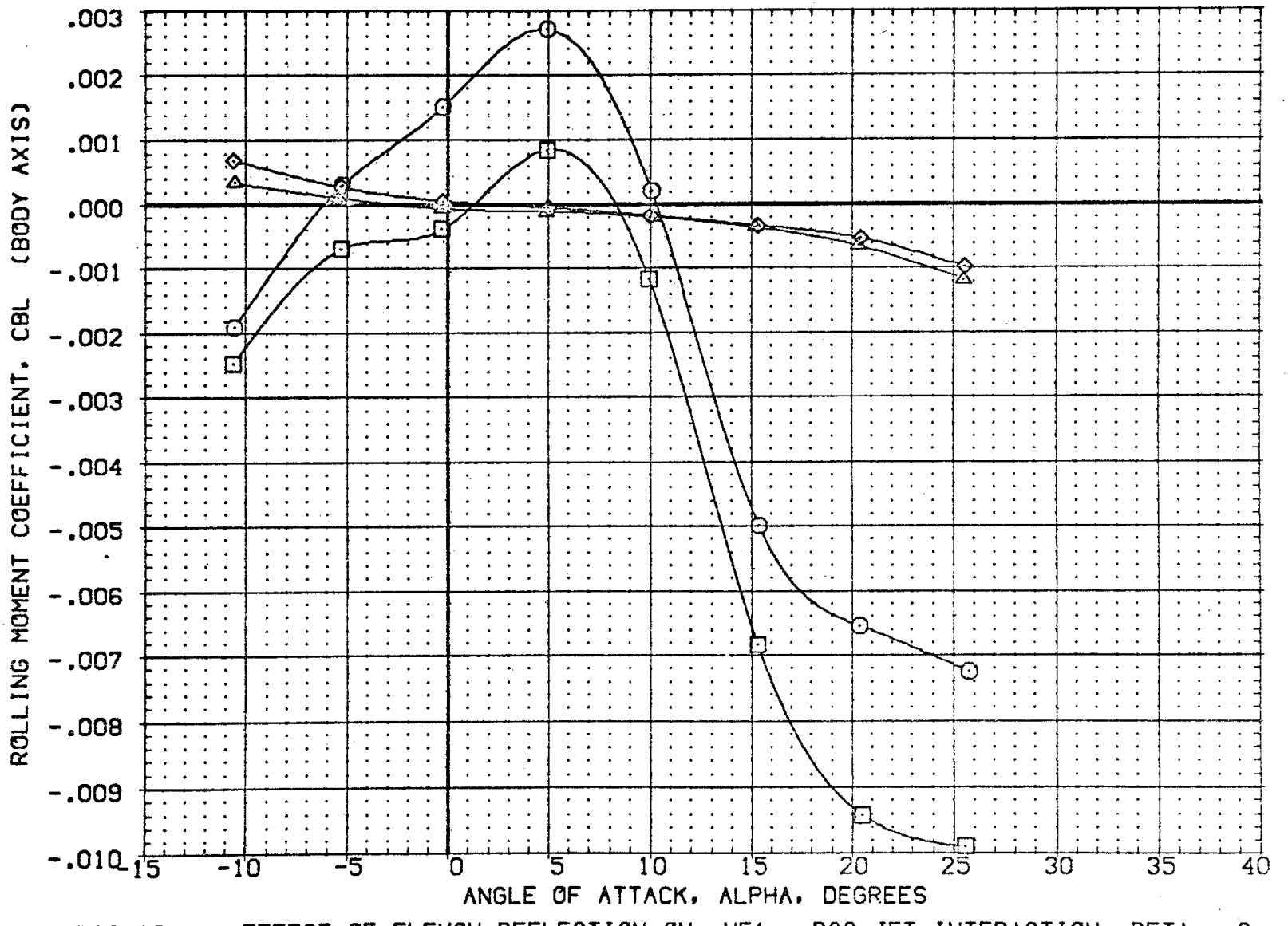


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH230N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-20.000	504.000	7.000	.000
(ZH221N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

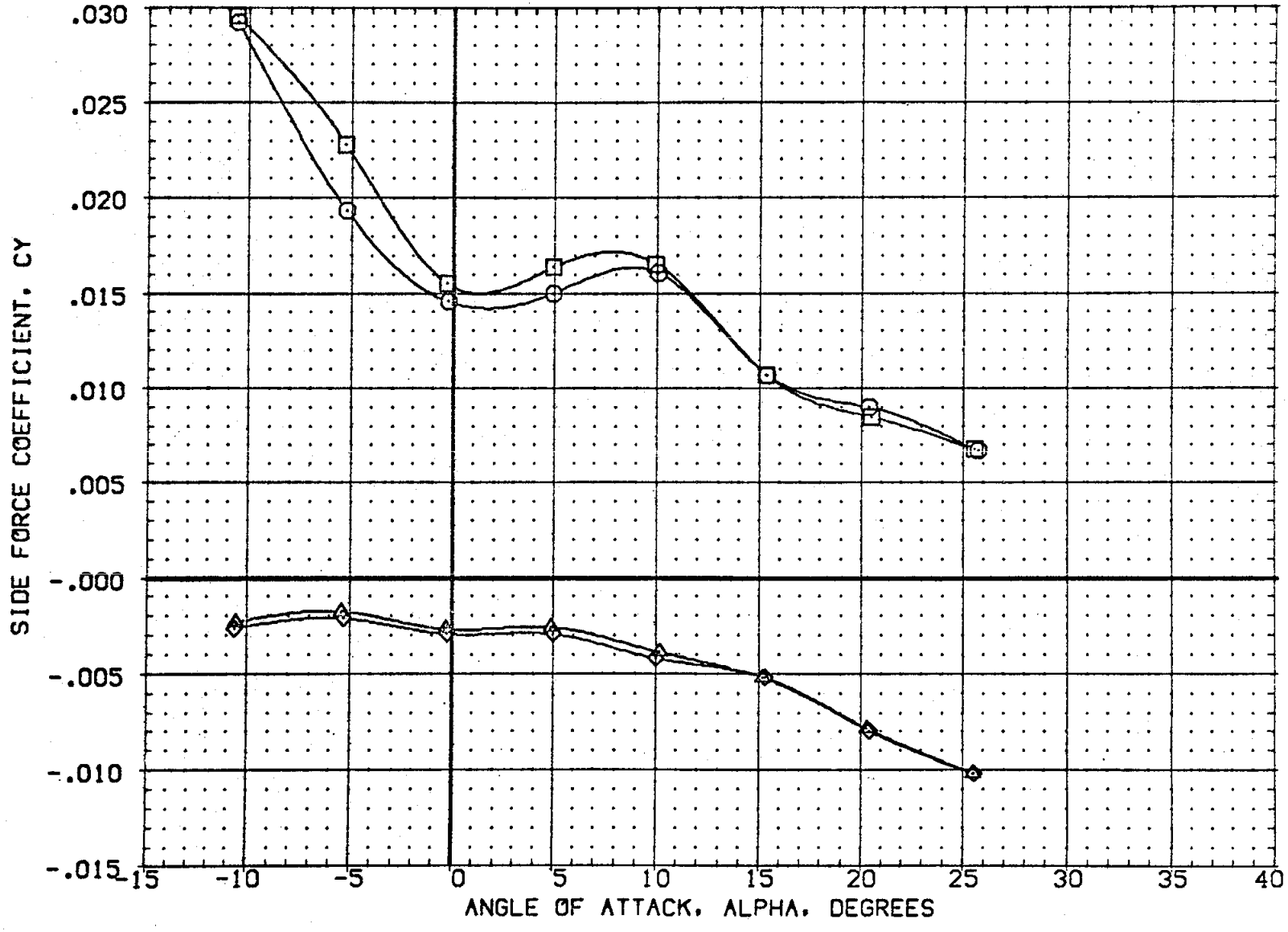


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CQ1004) ○	0A-85 CFHT101 MODEL 32-0 0IN51	YAW	-20.000	179.000	20.000	.000
(CQ1003) □	0A-85 CFHT101 MODEL 32-0 0IN51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	IN

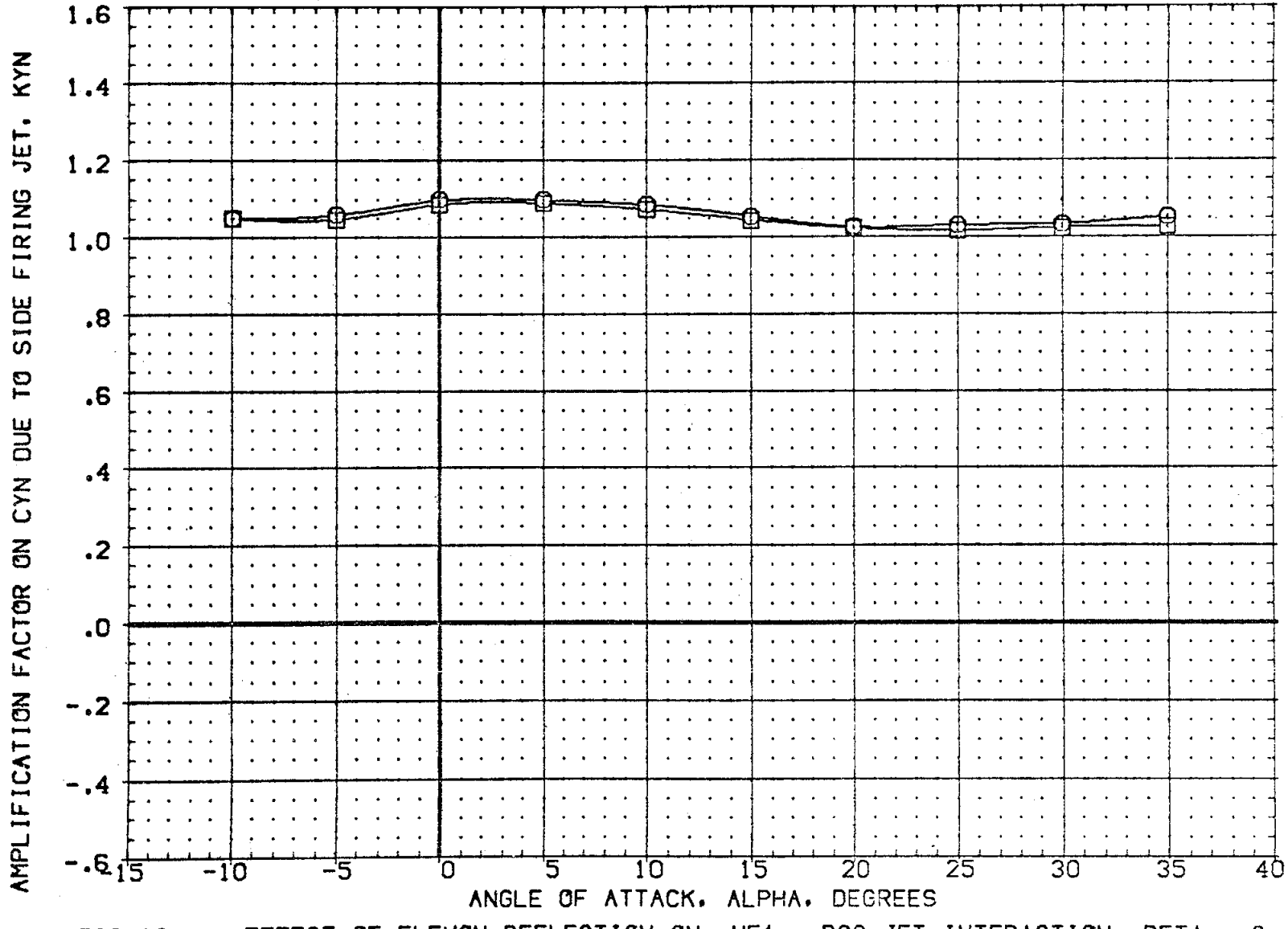


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004)	○	OA-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(CQ1003)	□	OA-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

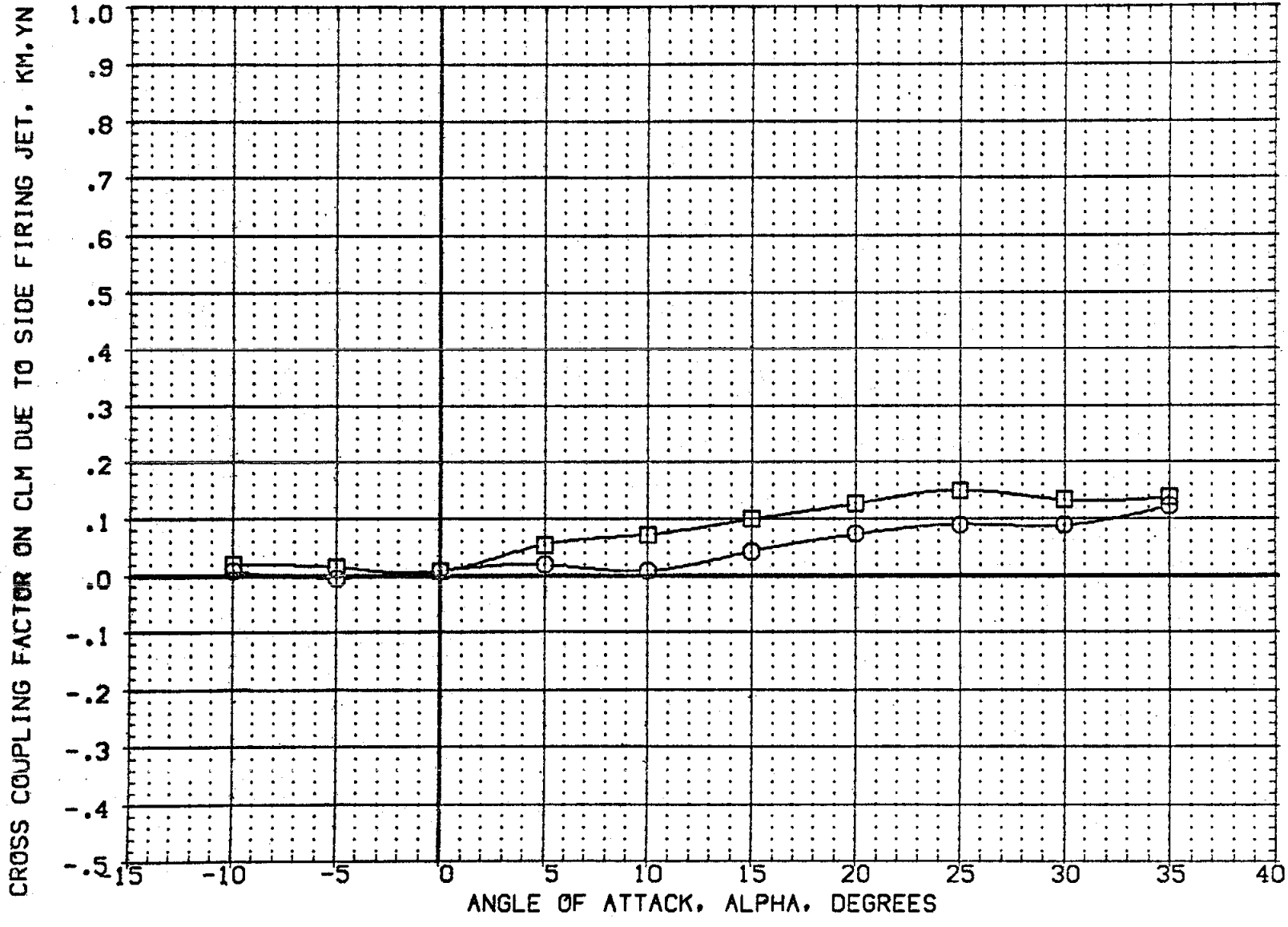


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(CQ1003)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

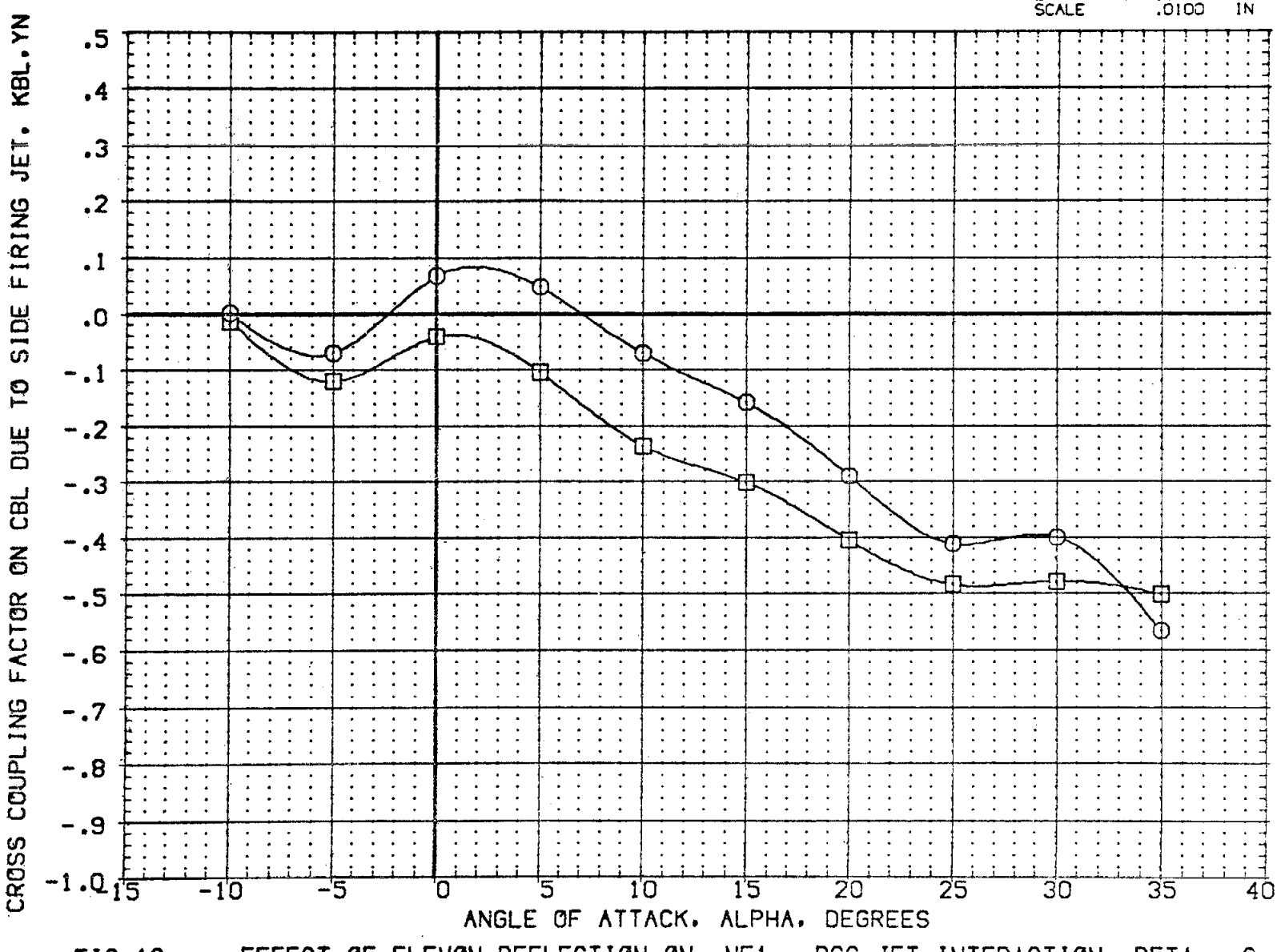


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION. BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(CQ1003)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

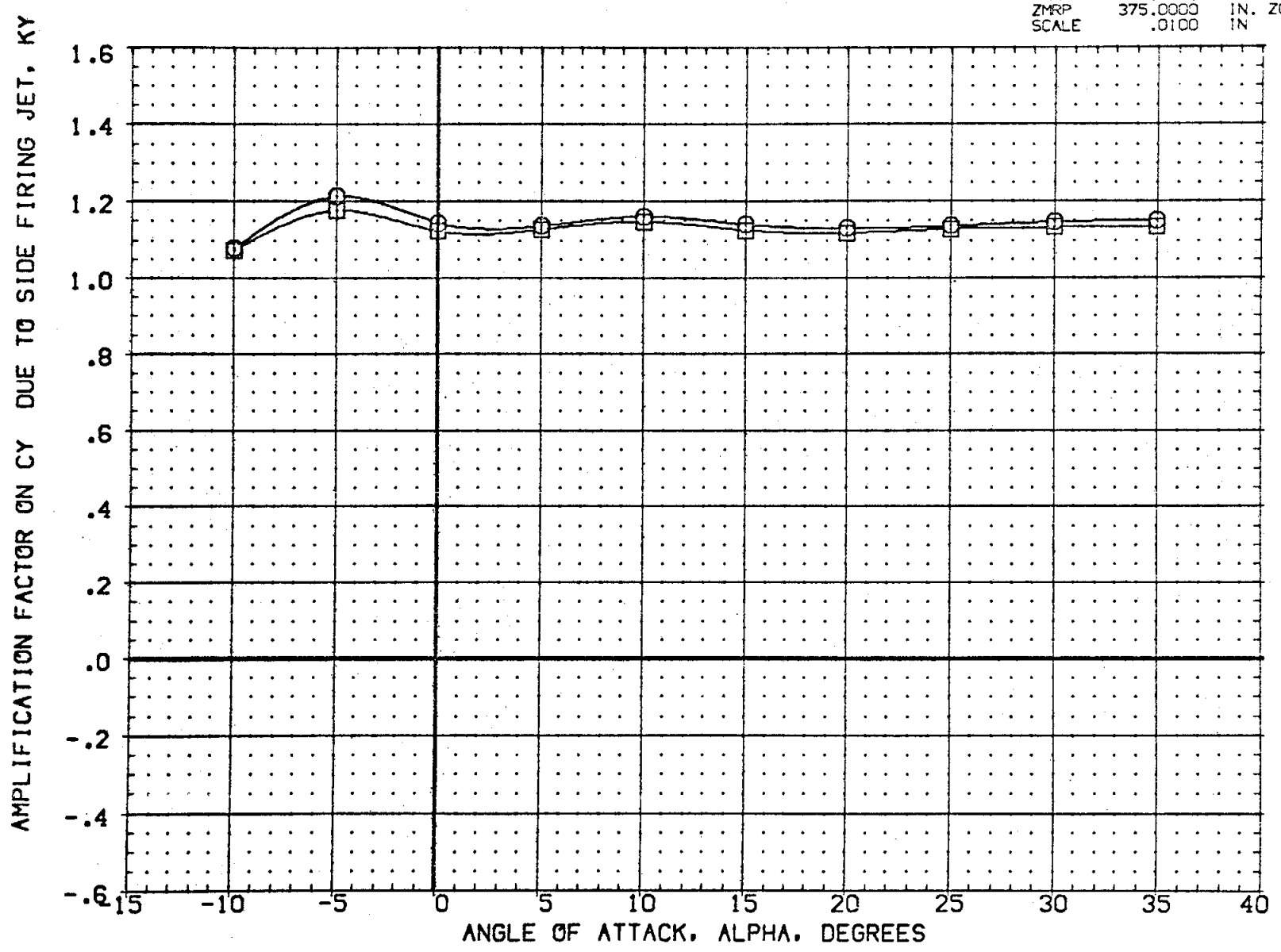


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004) ○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(CQ1003) □	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

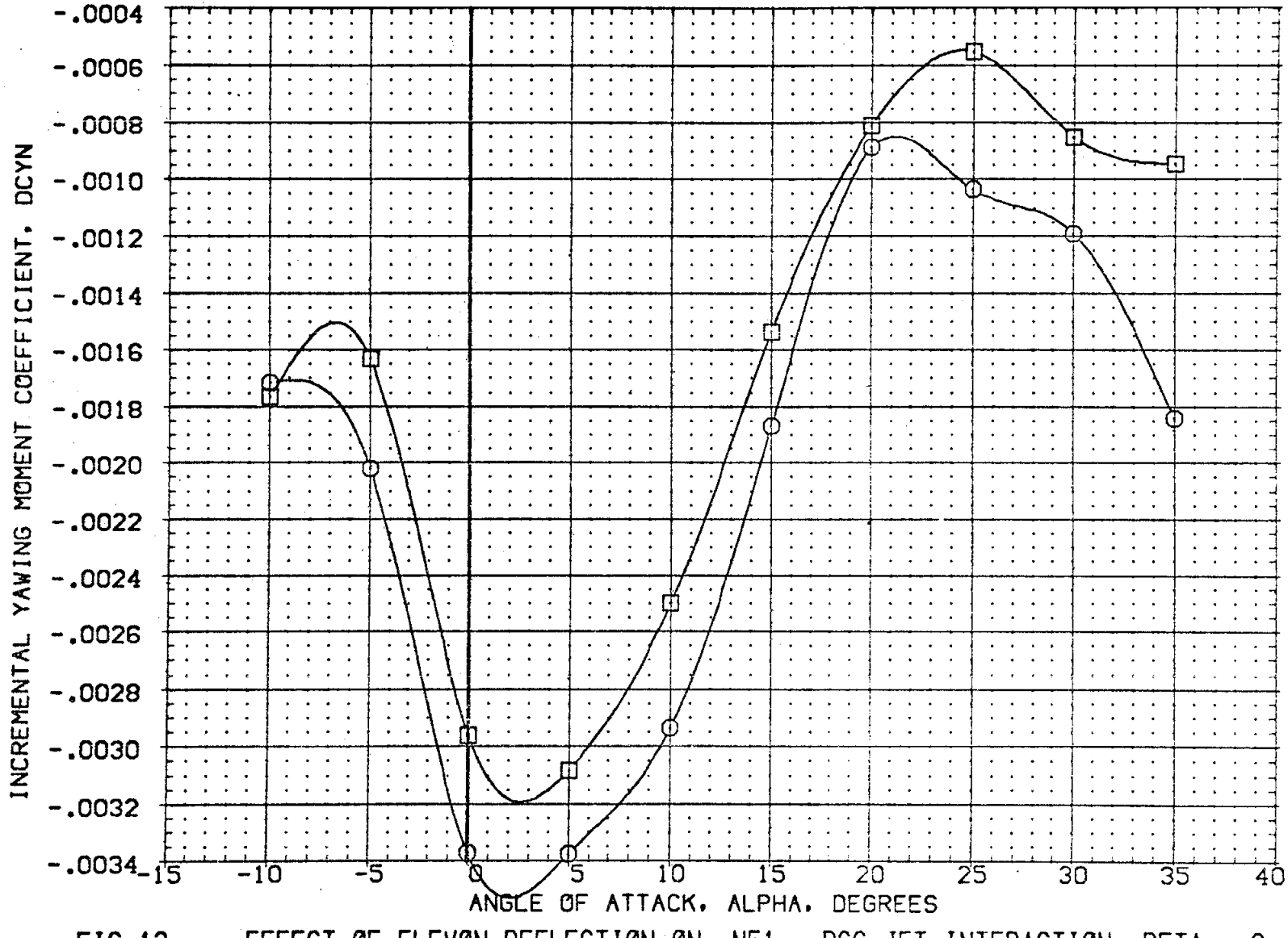


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004)	○	OA-85 CFHT101 MODEL 32-0 OIN51	YAW	-20.000	179.000	20.000	.000
(CQ1003)	□	OA-85 CFHT101 MODEL 32-0 OIN51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

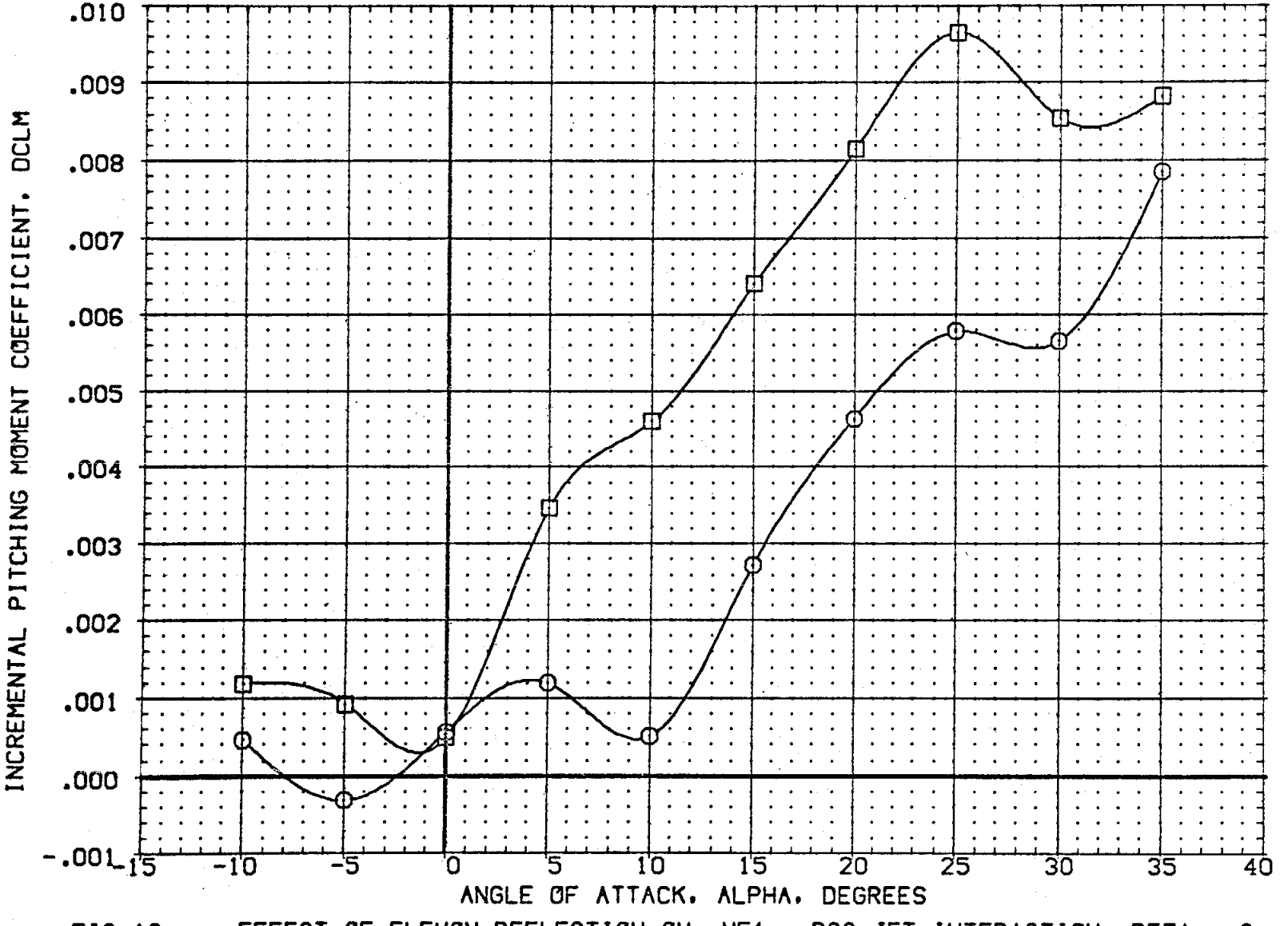


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004) ○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(CQ1003) □	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

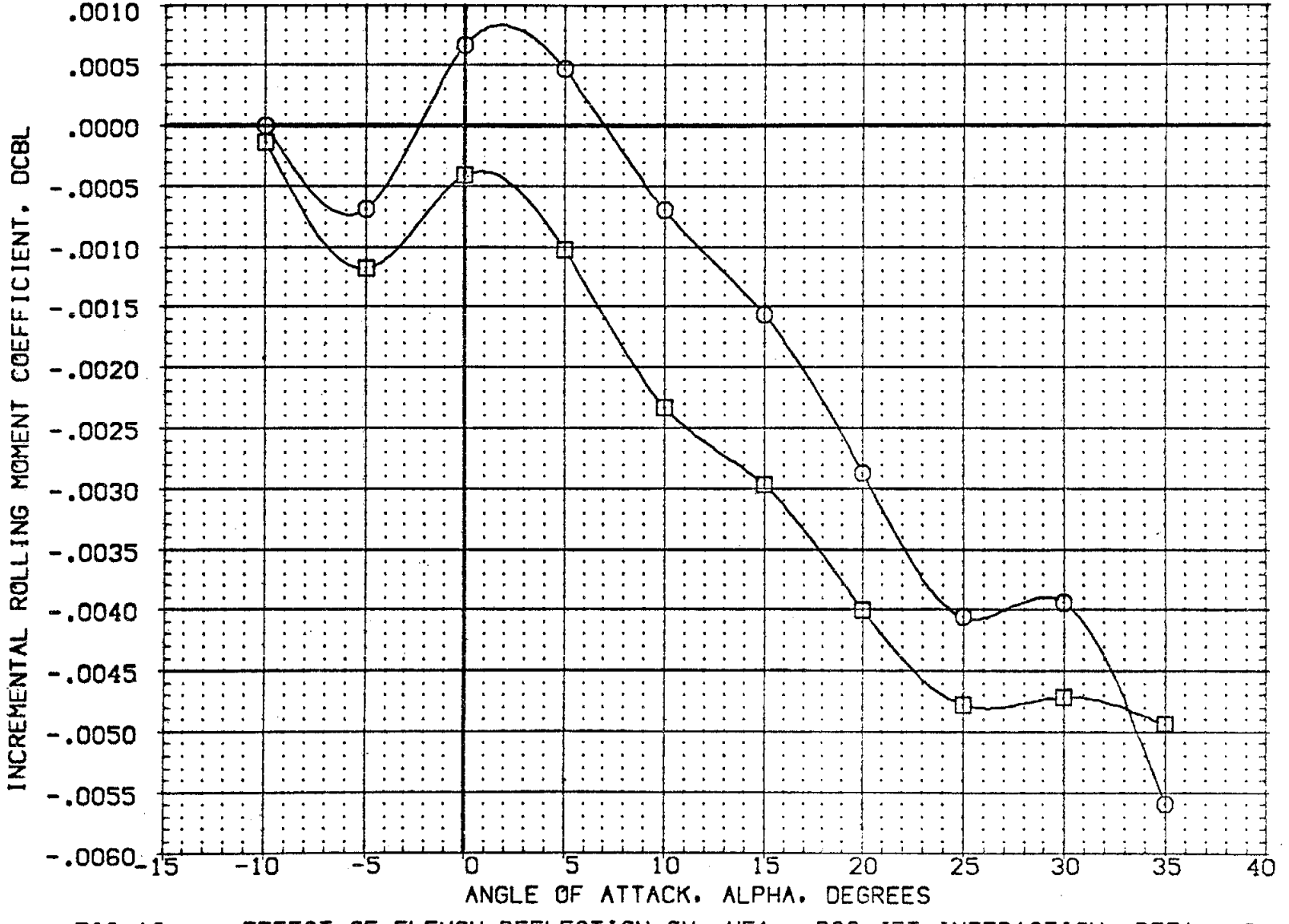


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CQ1004) ○	0A-85 CFHT101 MODEL 32-0 01NS1	YAW	-20.000	179.000	20.000	.000
(CQ1003) □	0A-85 CFHT101 MODEL 32-0 01NS1	YAW	15.000	179.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

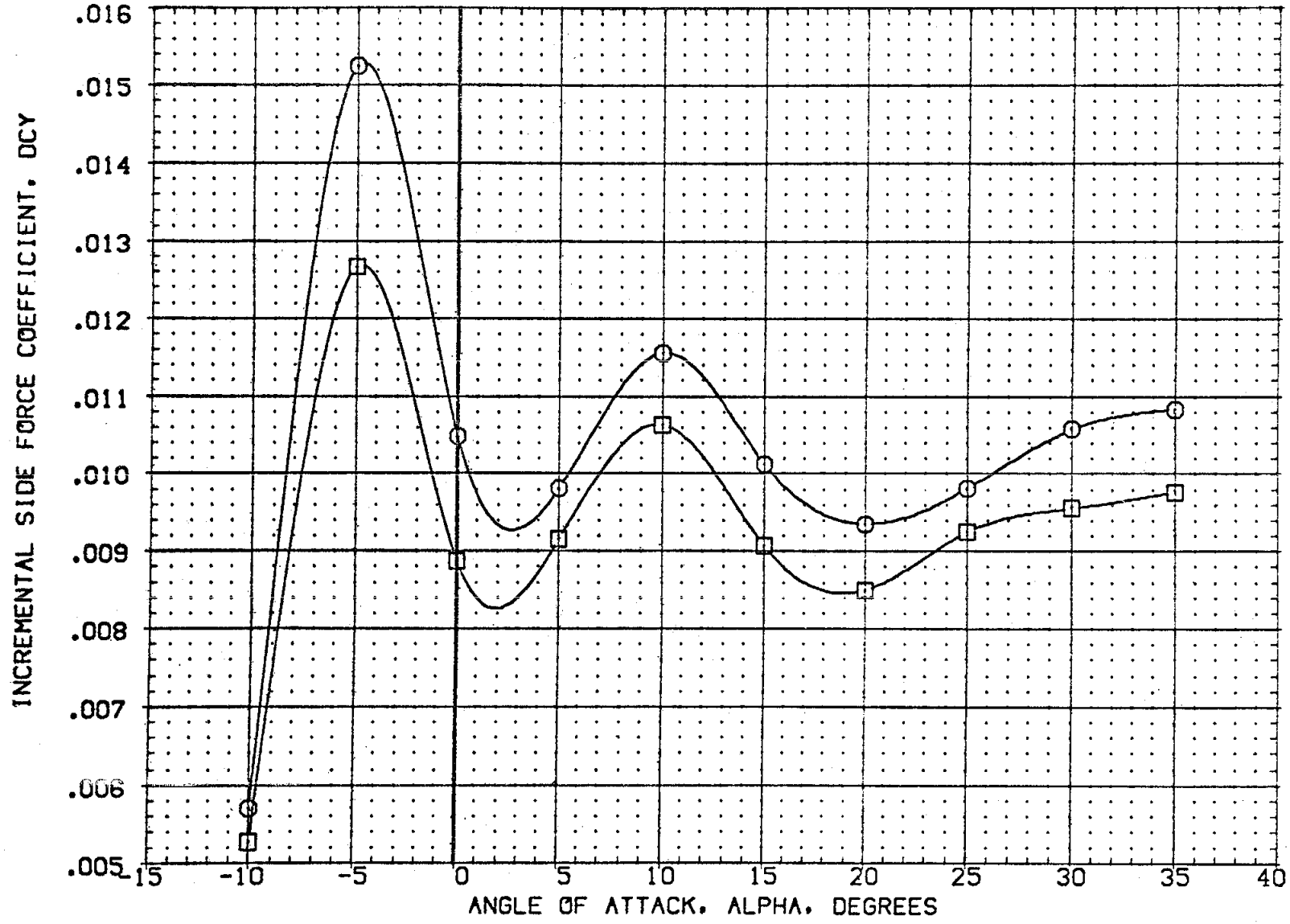


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZQ104N)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(ZQ103N)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000
(ZQ102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000
(ZQ101F)	△	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

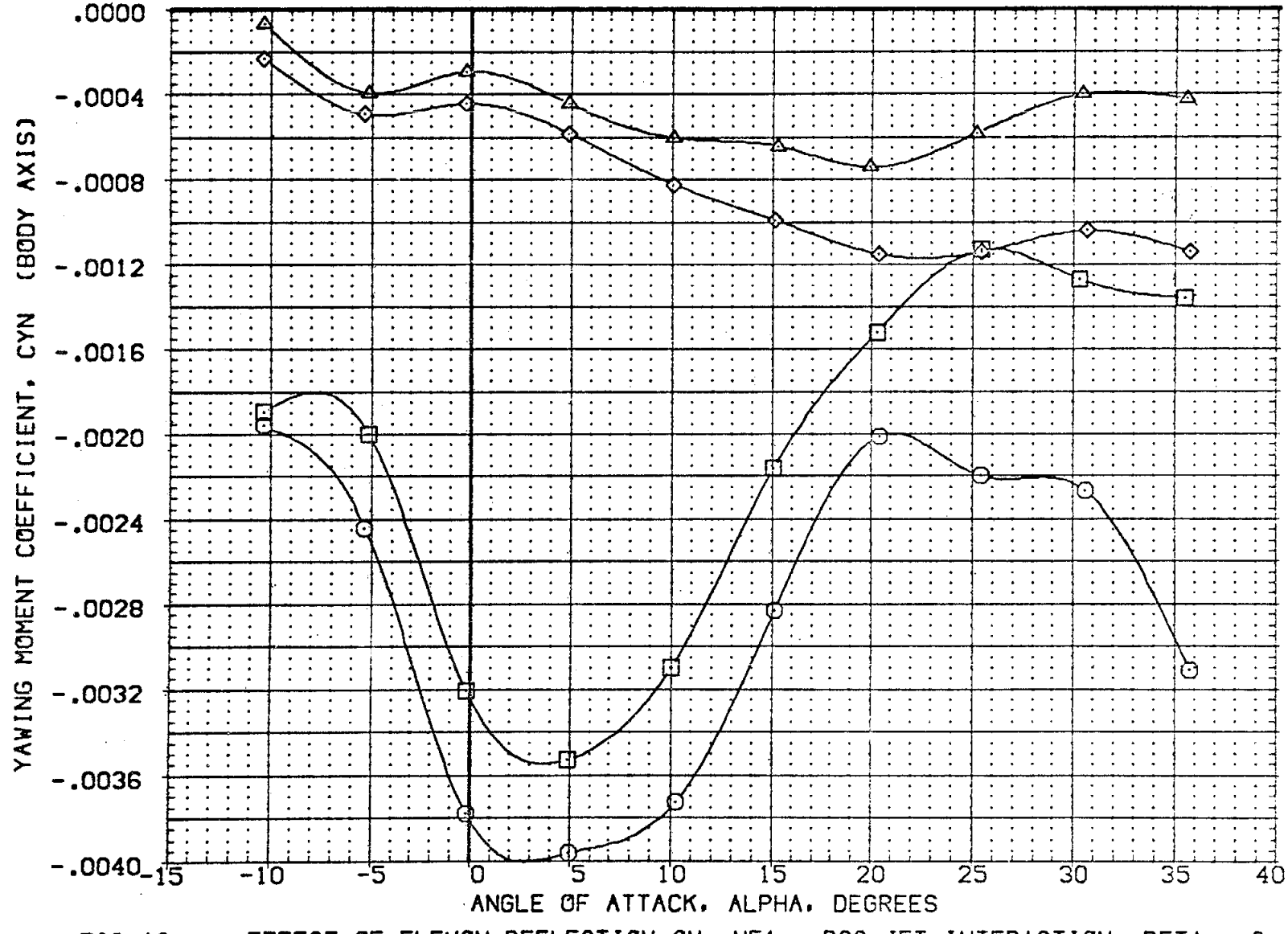


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION			ELEVON	PCRCS	Q-SIM	BDFLAP
(ZQ104N)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW		-20.000	179.000	20.000	.000
(ZQ103N)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW		15.000	179.000	20.000	.000
(ZQ102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51		RCS OFF	-20.000	.000	.000	.000
(ZQ101F)	△	0A-85 CFHT101 MODEL 32-0 01 N49 N50		RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

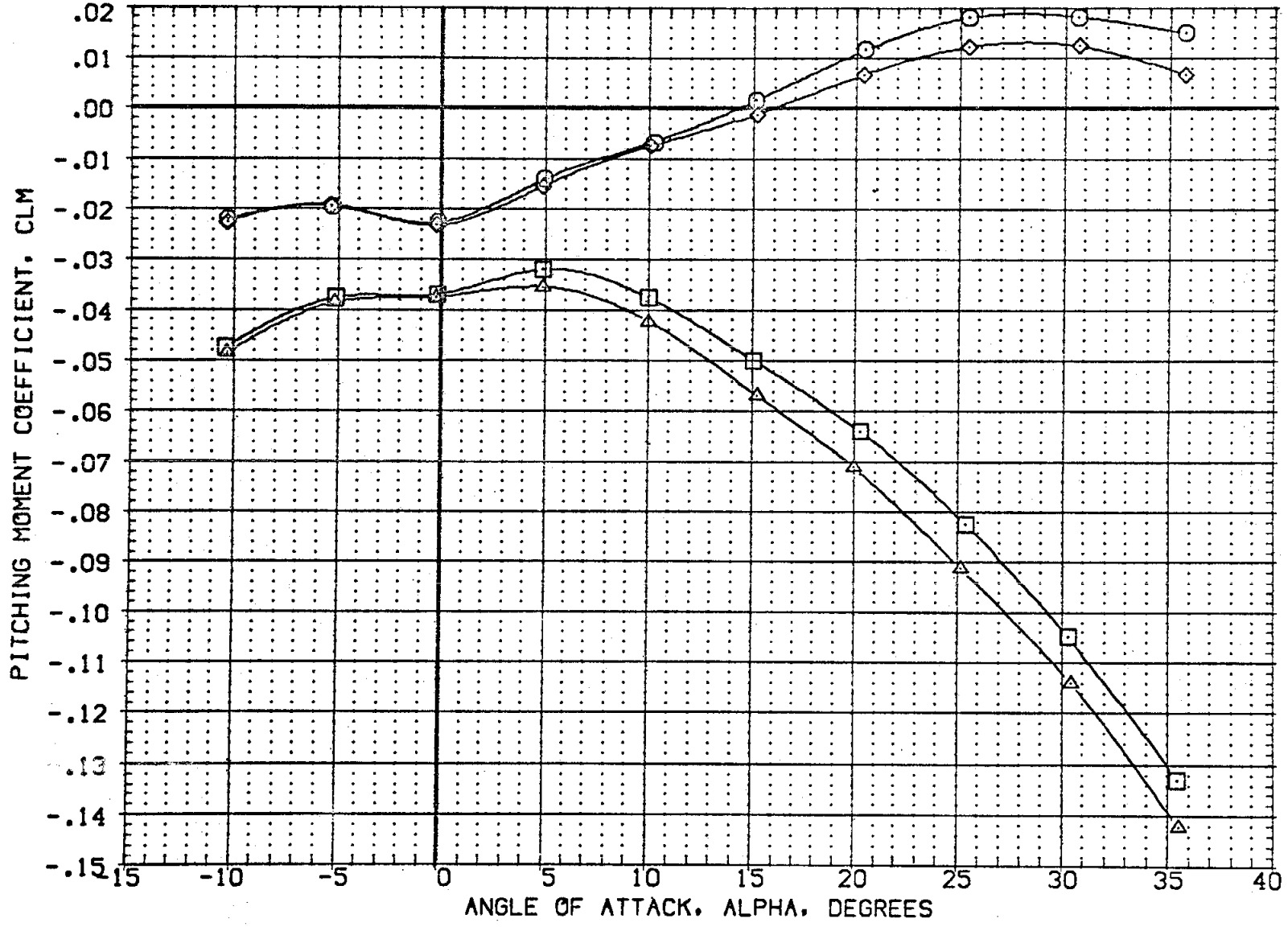


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	O-SIM	BOFLAP
(Z0104N)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(Z0103N)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000
(Z0102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000
(Z0101F)	△	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	IN

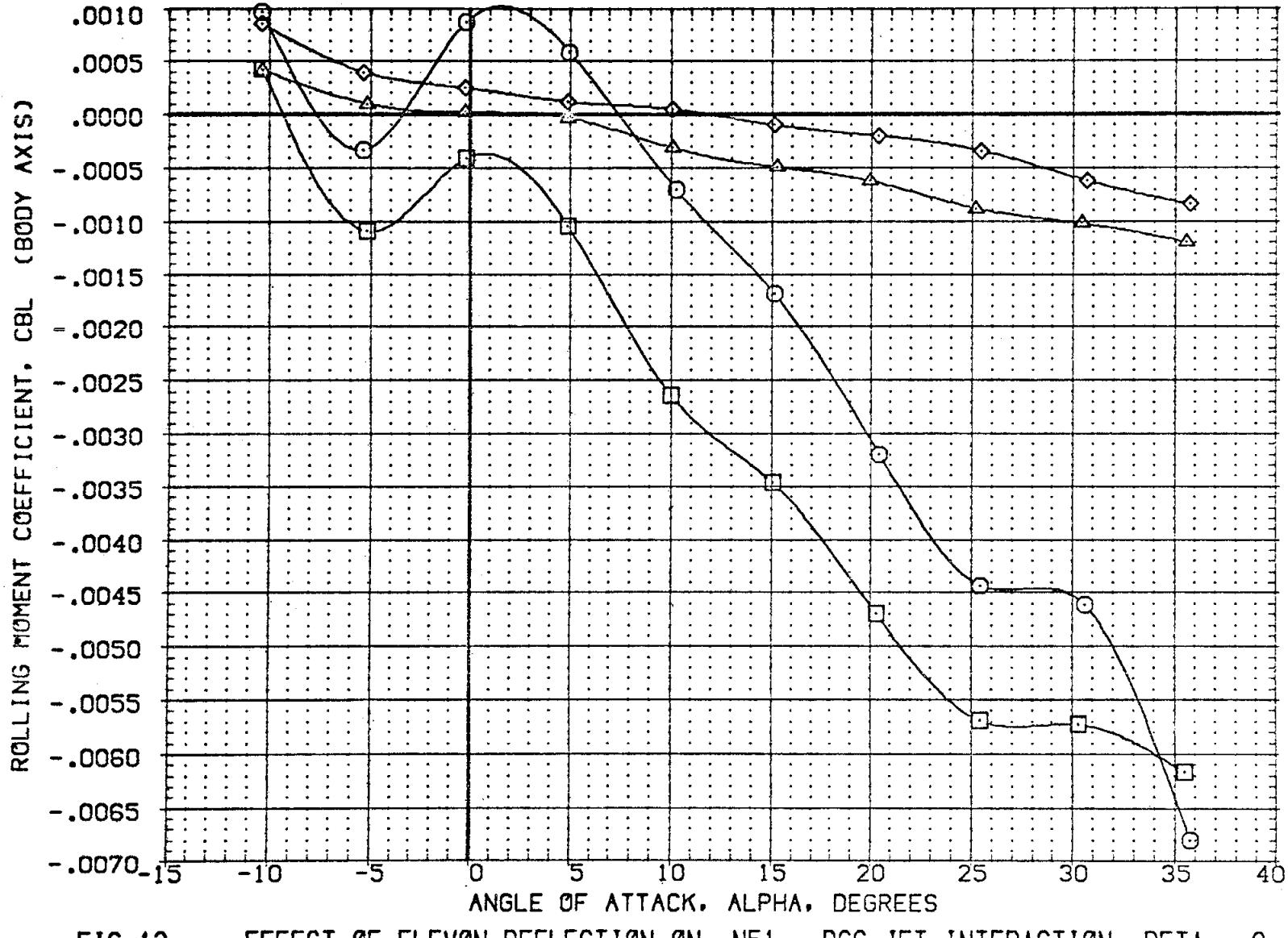


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZQ104N)	○	0A-85 CFHT101 MODEL 32-0 01N51	YAW	-20.000	179.000	20.000	.000
(ZQ103N)	□	0A-85 CFHT101 MODEL 32-0 01N51	YAW	15.000	179.000	20.000	.000
(ZQ102F)	◇	0A-85 CFHT101 MODEL 32-0 01 N51	RCS OFF	-20.000	.000	.000	.000
(ZQ101F)	△	0A-85 CFHT101 MODEL 32-0 01 N49 N50	RCS OFF	15.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	IN

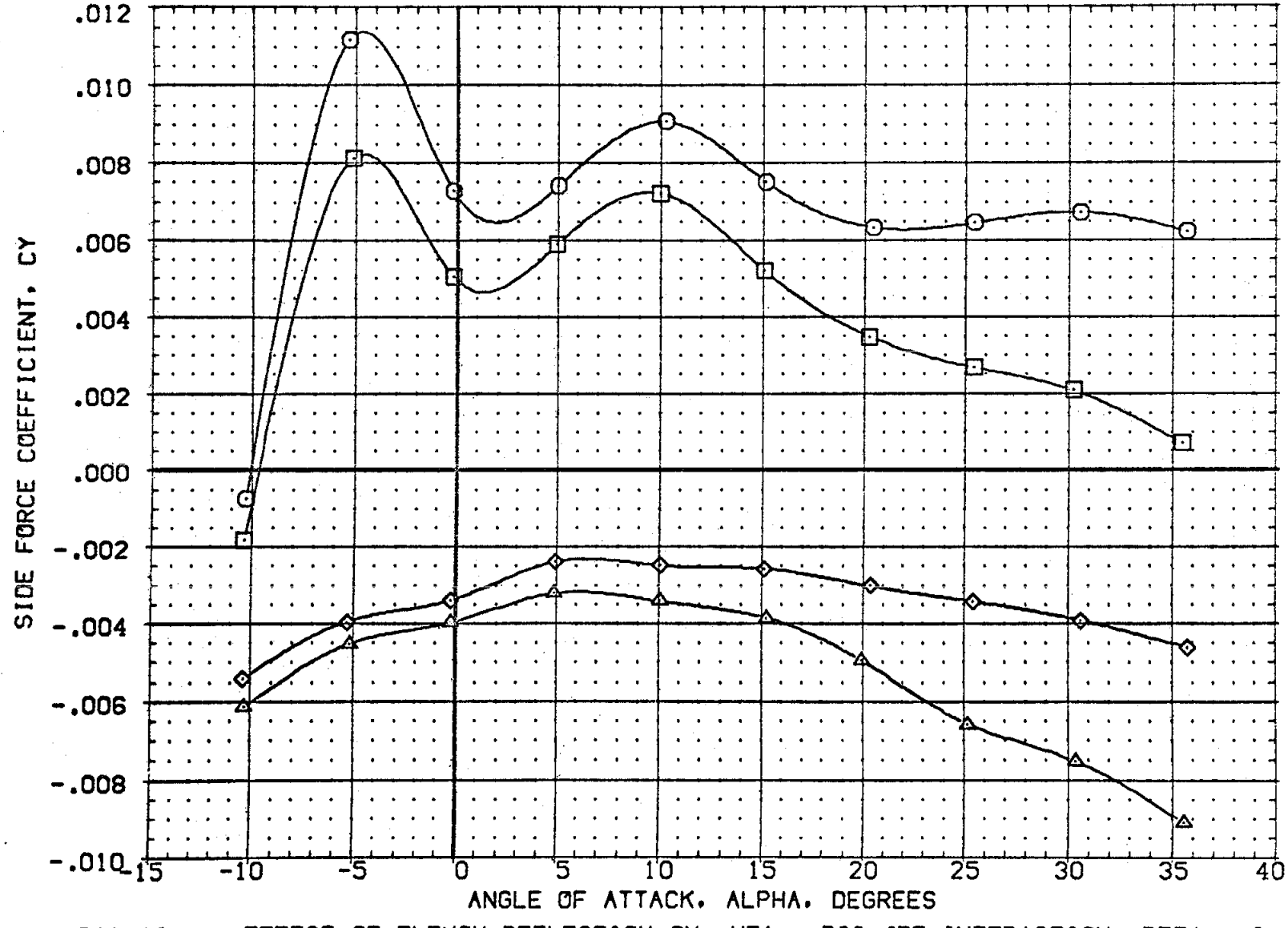


FIG 12 EFFECT OF ELEVON DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

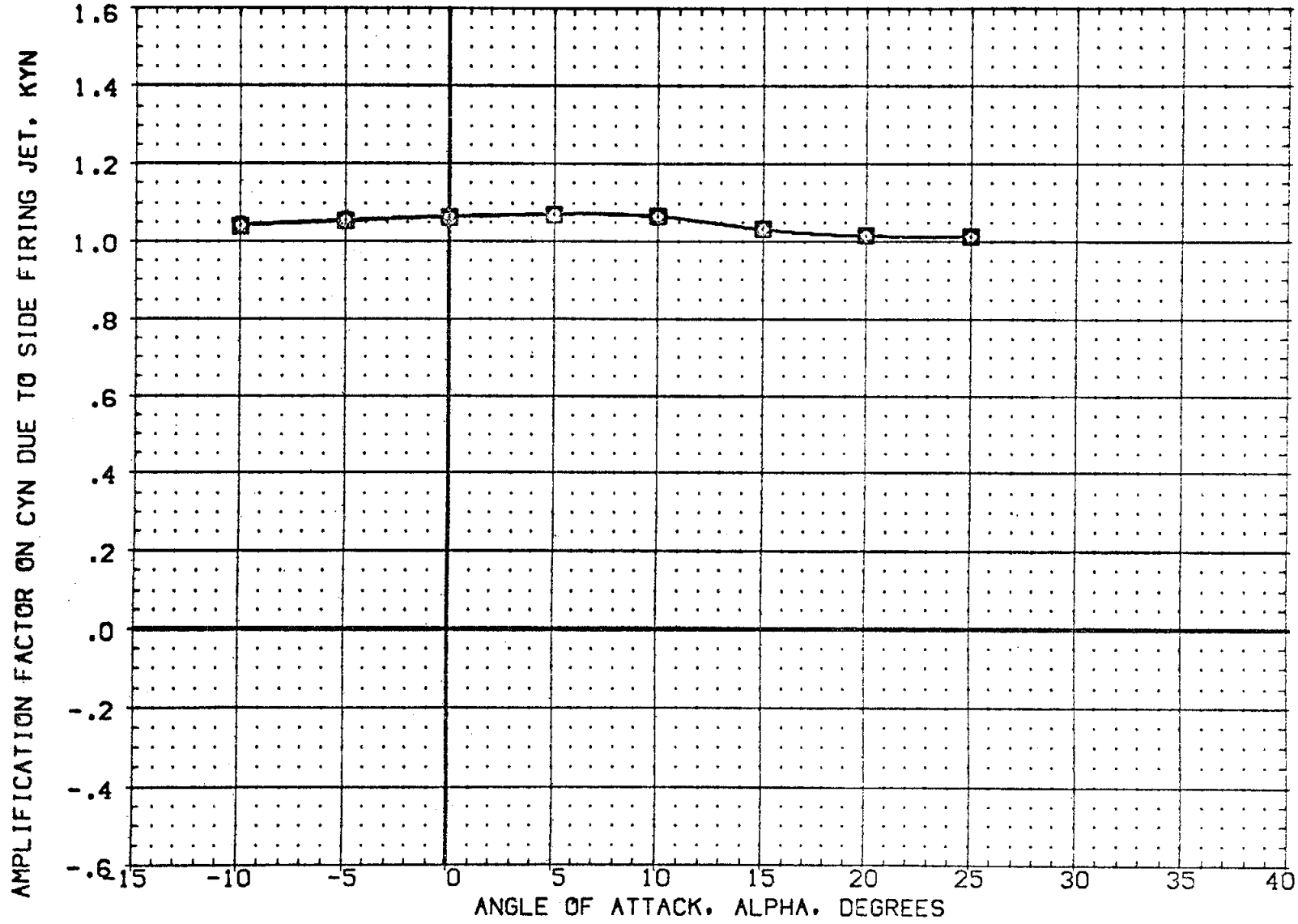


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

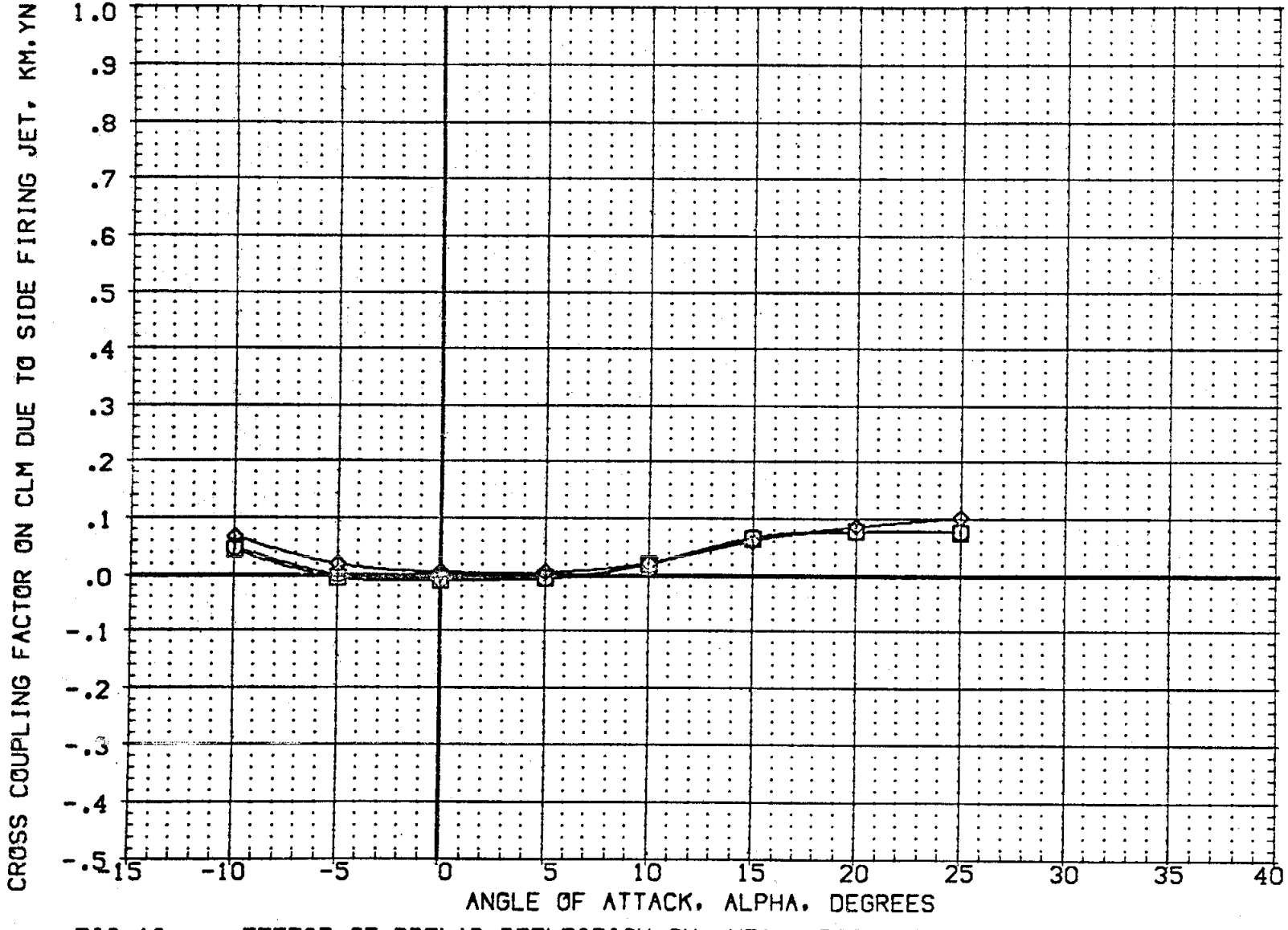


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2020) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003) ◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

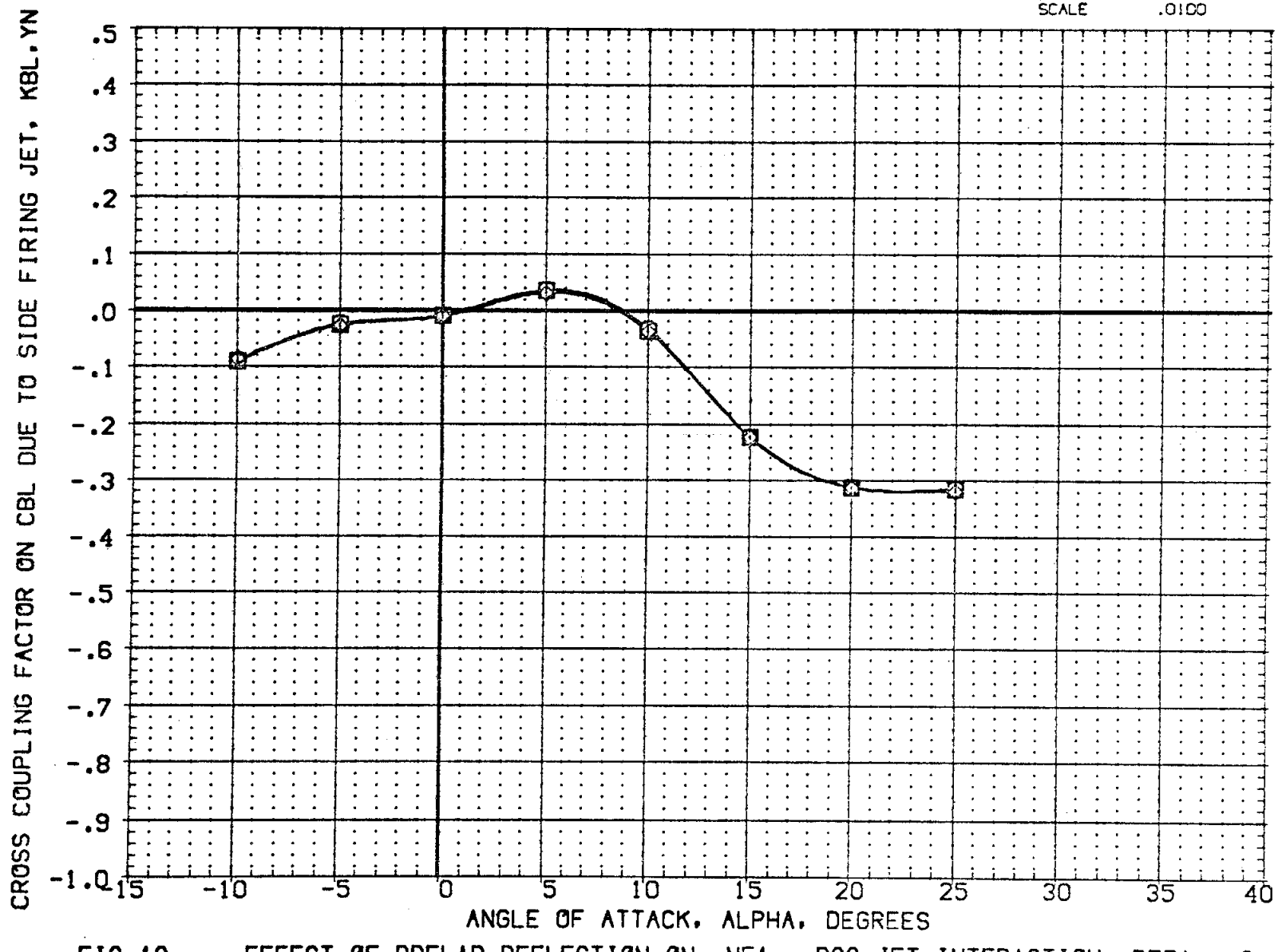


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

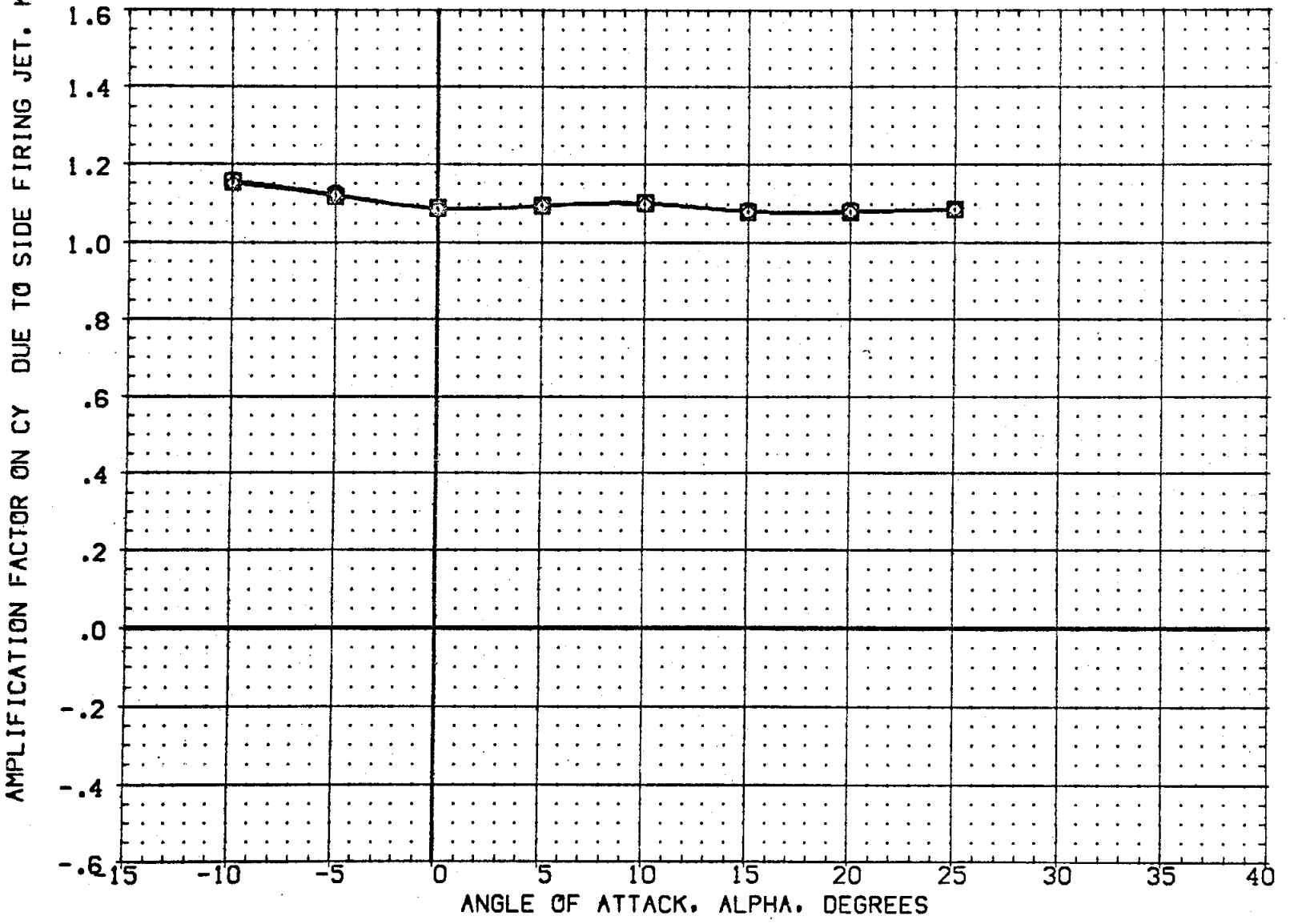


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2020) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003) ◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

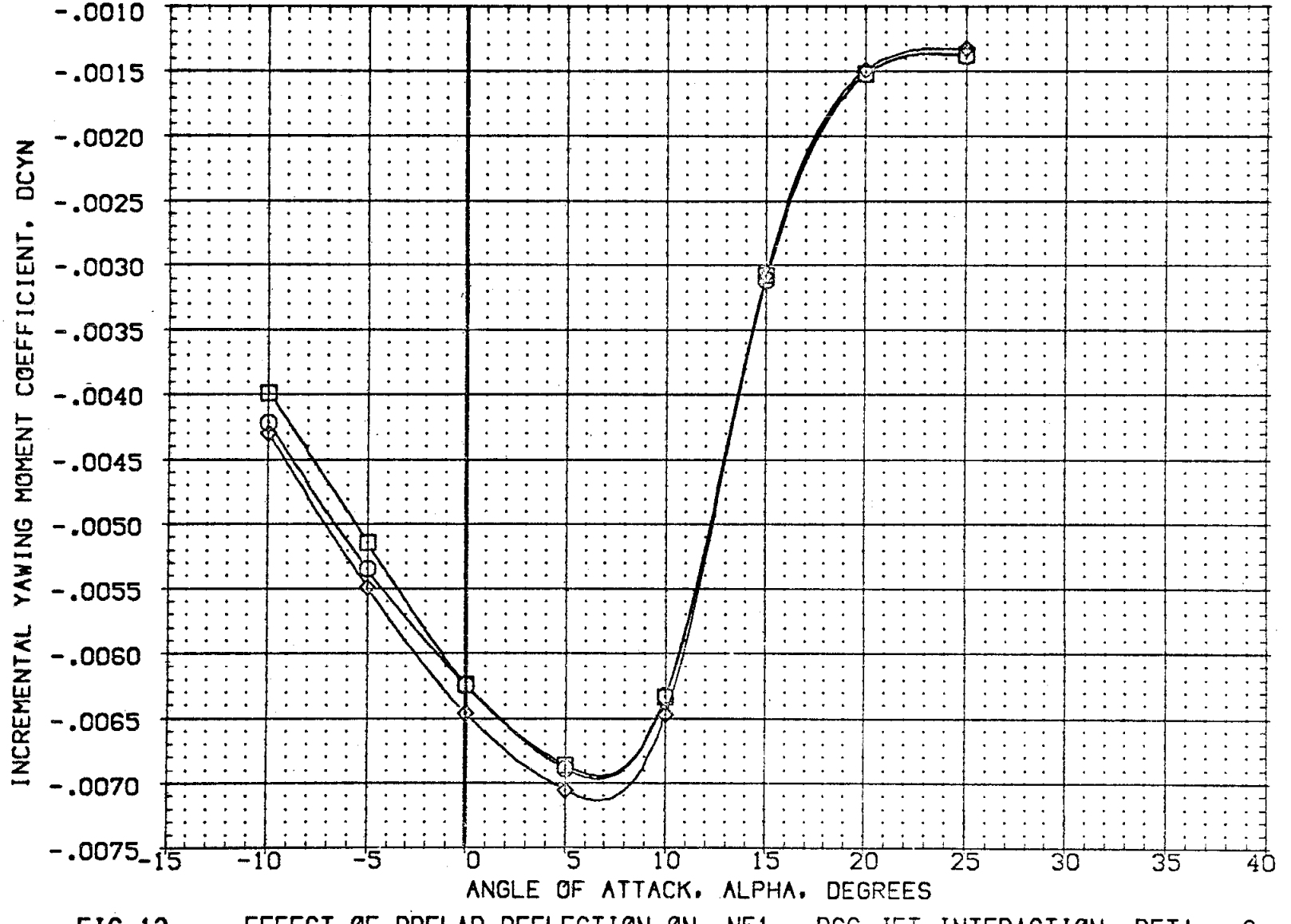


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

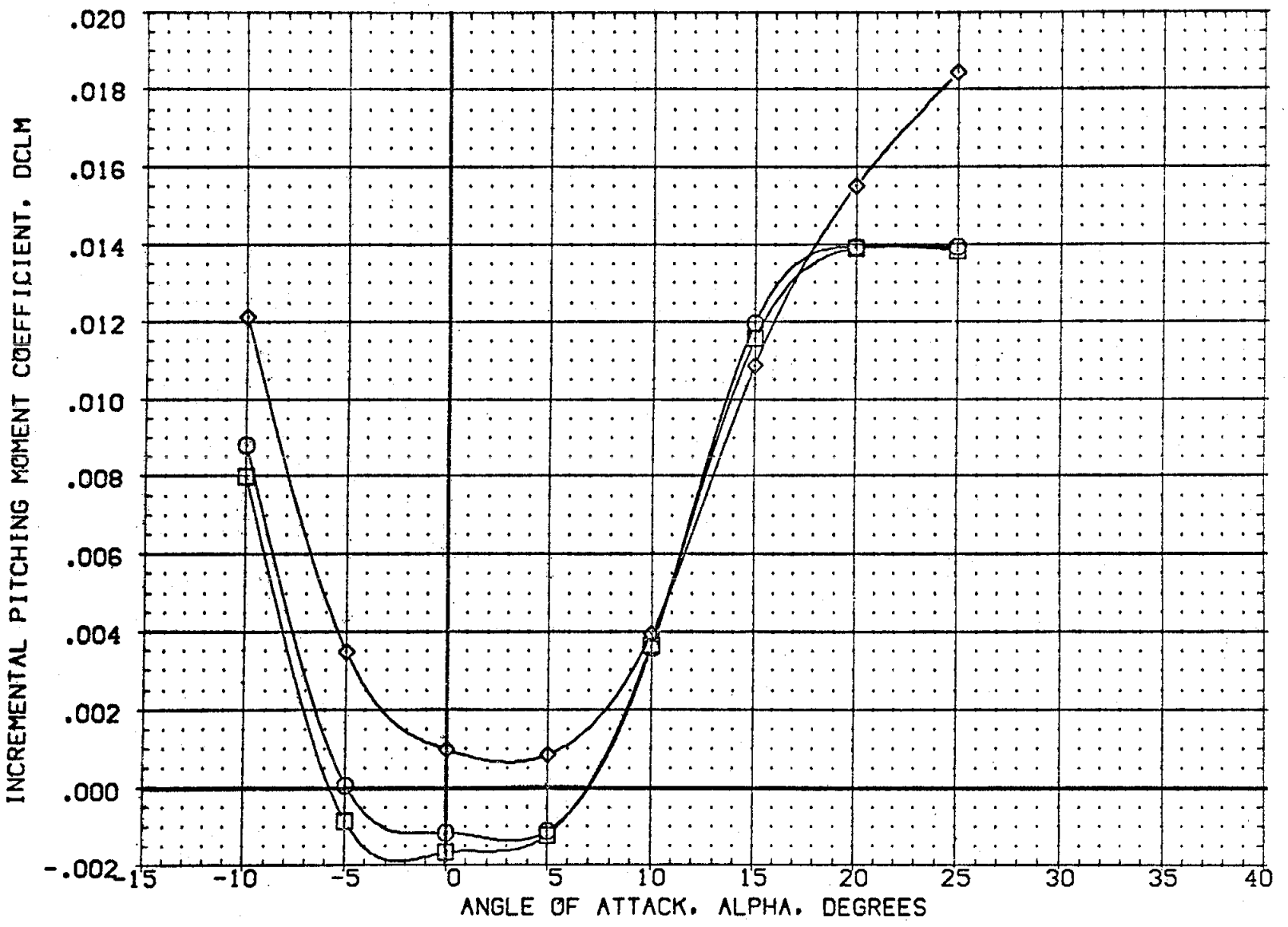


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

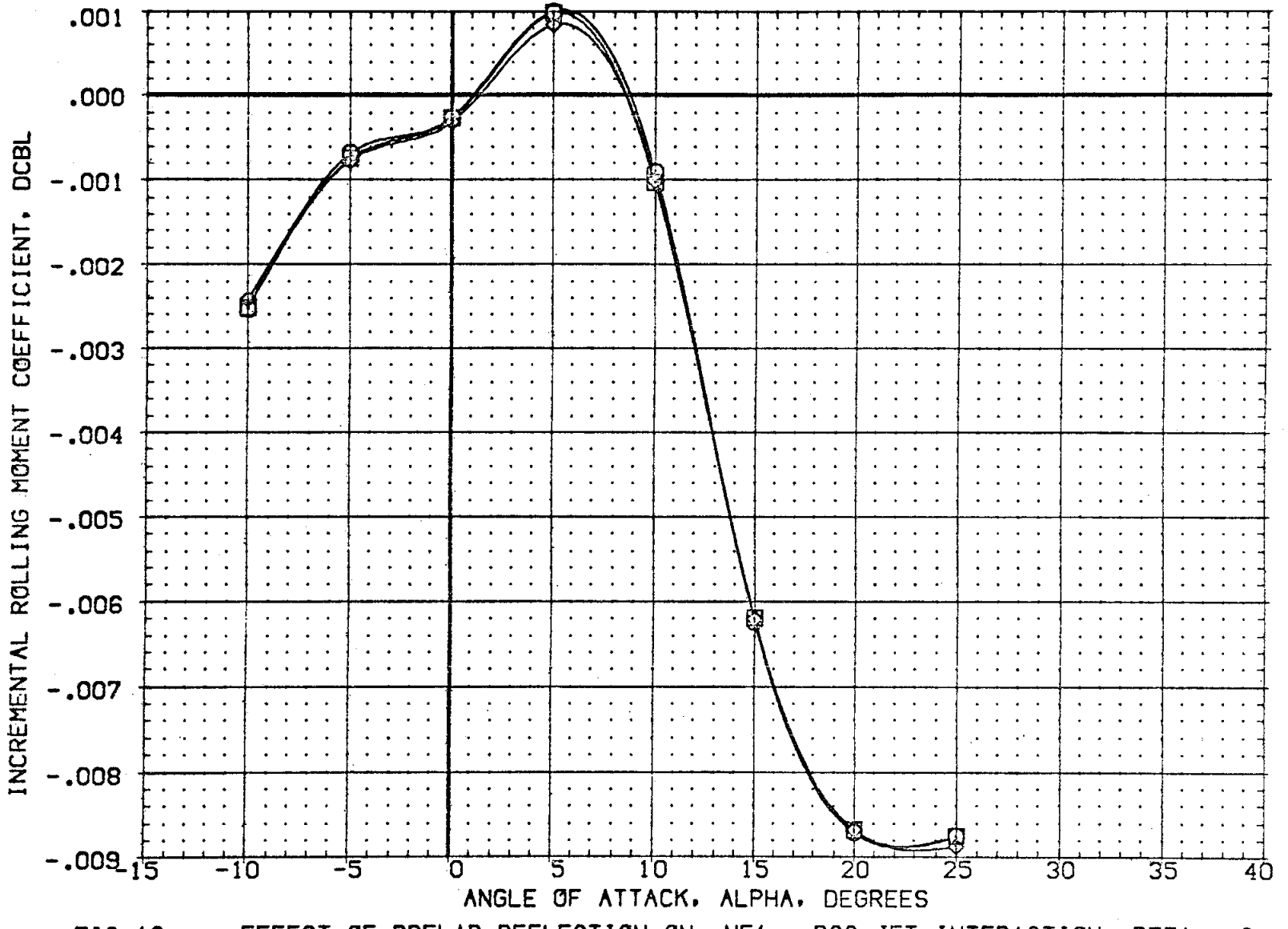


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2020)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(CH2021)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(CH2003)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

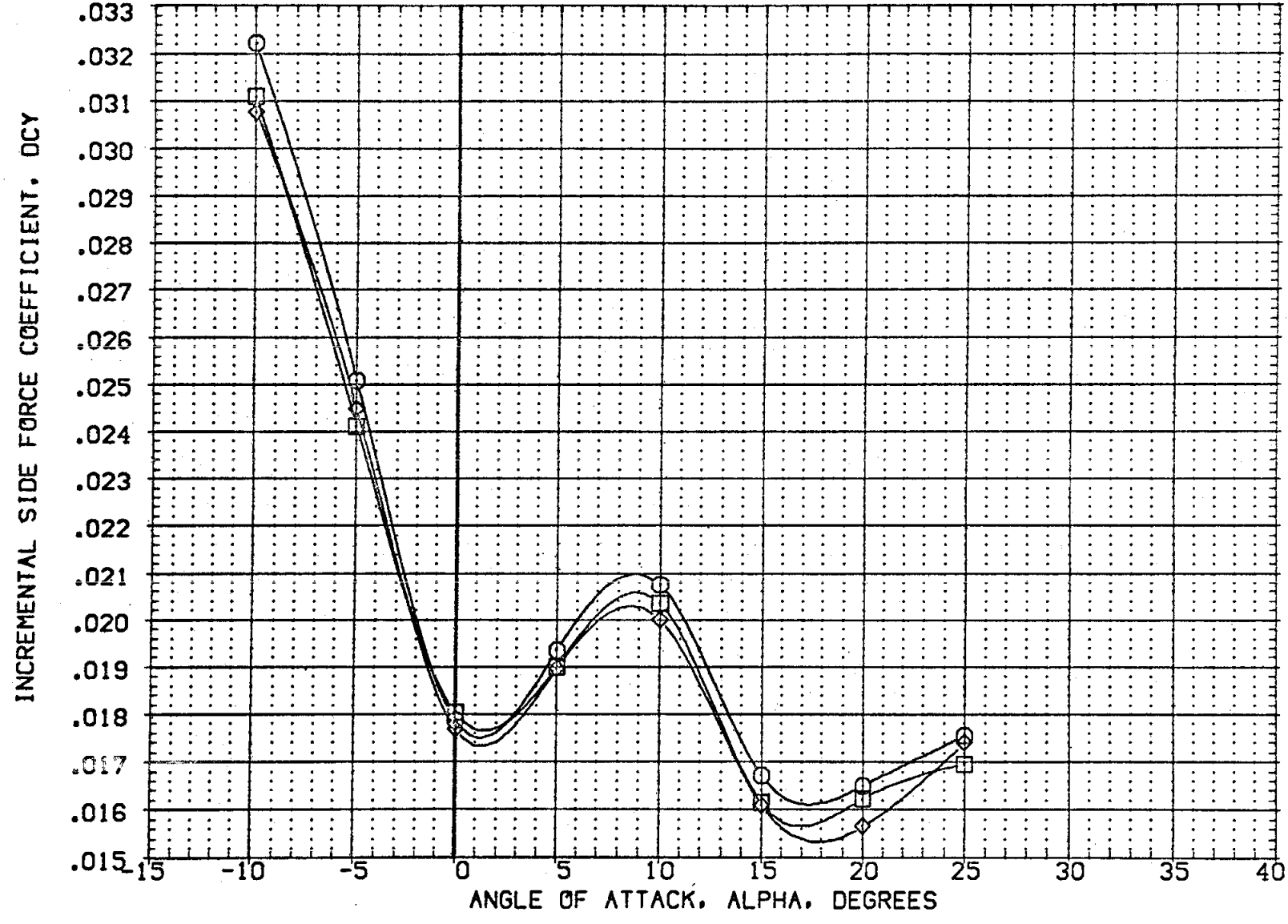


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM	REFERENCE INFORMATION		
(ZH220N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000	SREF	2690.0000	SQ.FT.
(ZH221N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000	LREF	474.8100	IN.
(ZH203N)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000	BREF	936.6800	IN.
(ZH202F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000	XMRP	1076.6700	IN. XC
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000	YMRP	.0000	IN. YC
(ZH201F)	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000	ZMRP	375.0000	IN. ZC
							SCALE	.0100	

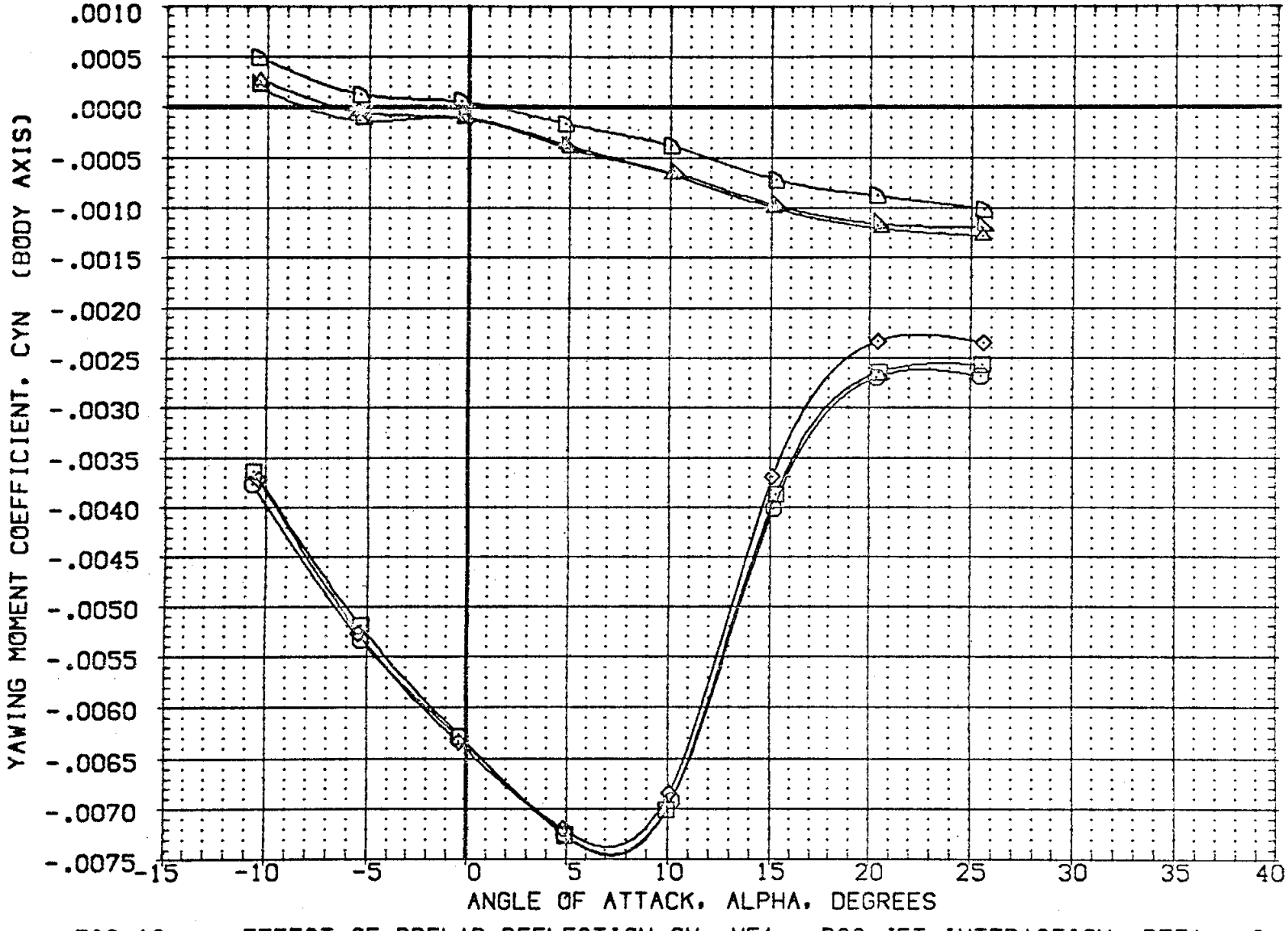


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH220N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(ZH221N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(ZH203N)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	◁	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

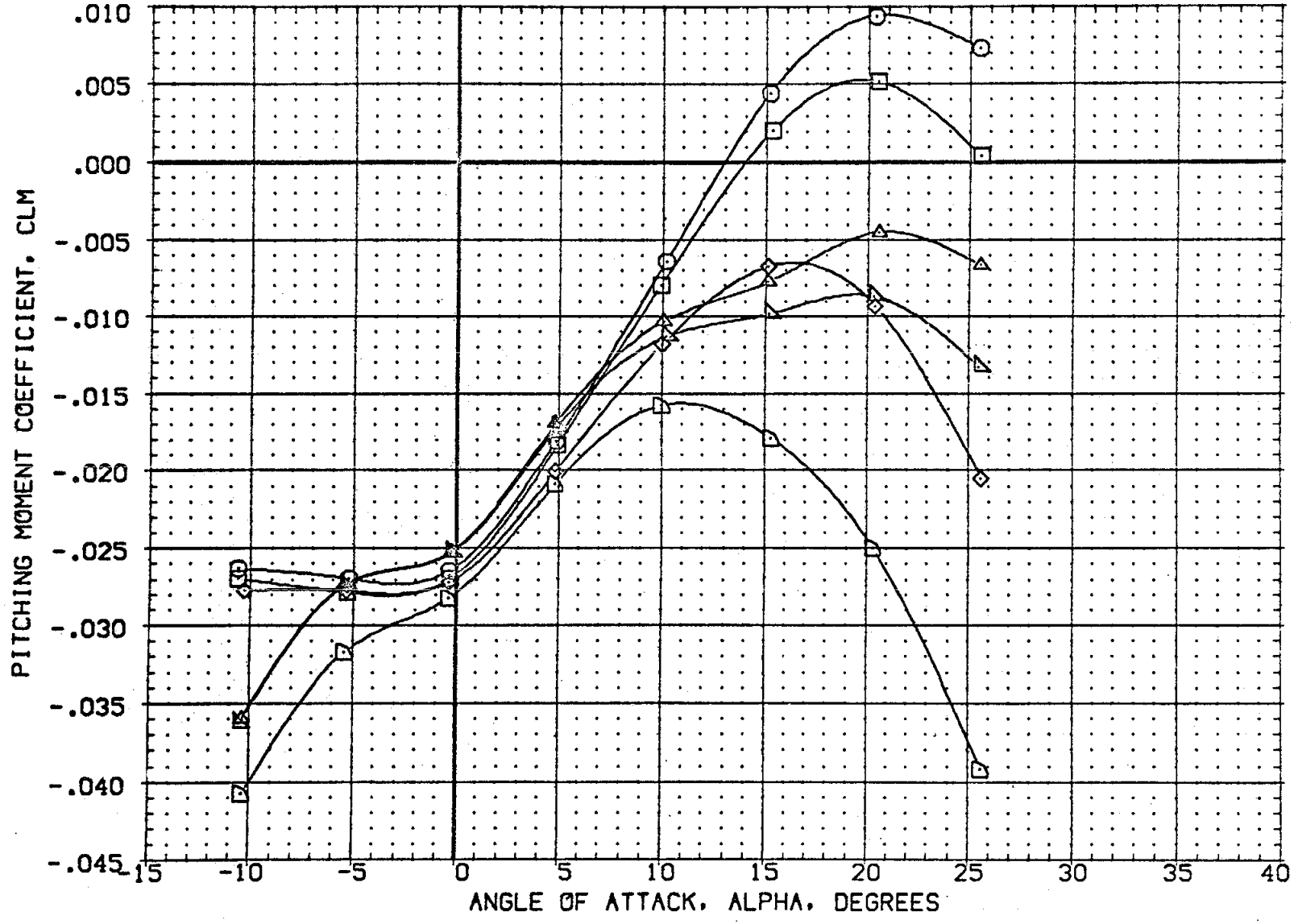


FIG 13 EFFECT OF BODFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM	REFERENCE INFORMATION		
(ZH220N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000	SREF	2690.0000	SQ.FT.
(ZH221N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000	LREF	474.8100	IN.
(ZH203N)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000	BREF	936.6800	IN.
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000	XMRP	1076.6700	IN. XO
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000	YMRP	.0000	IN. YO
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000	ZMRP	375.0000	IN. ZO
								SCALE	.0100	

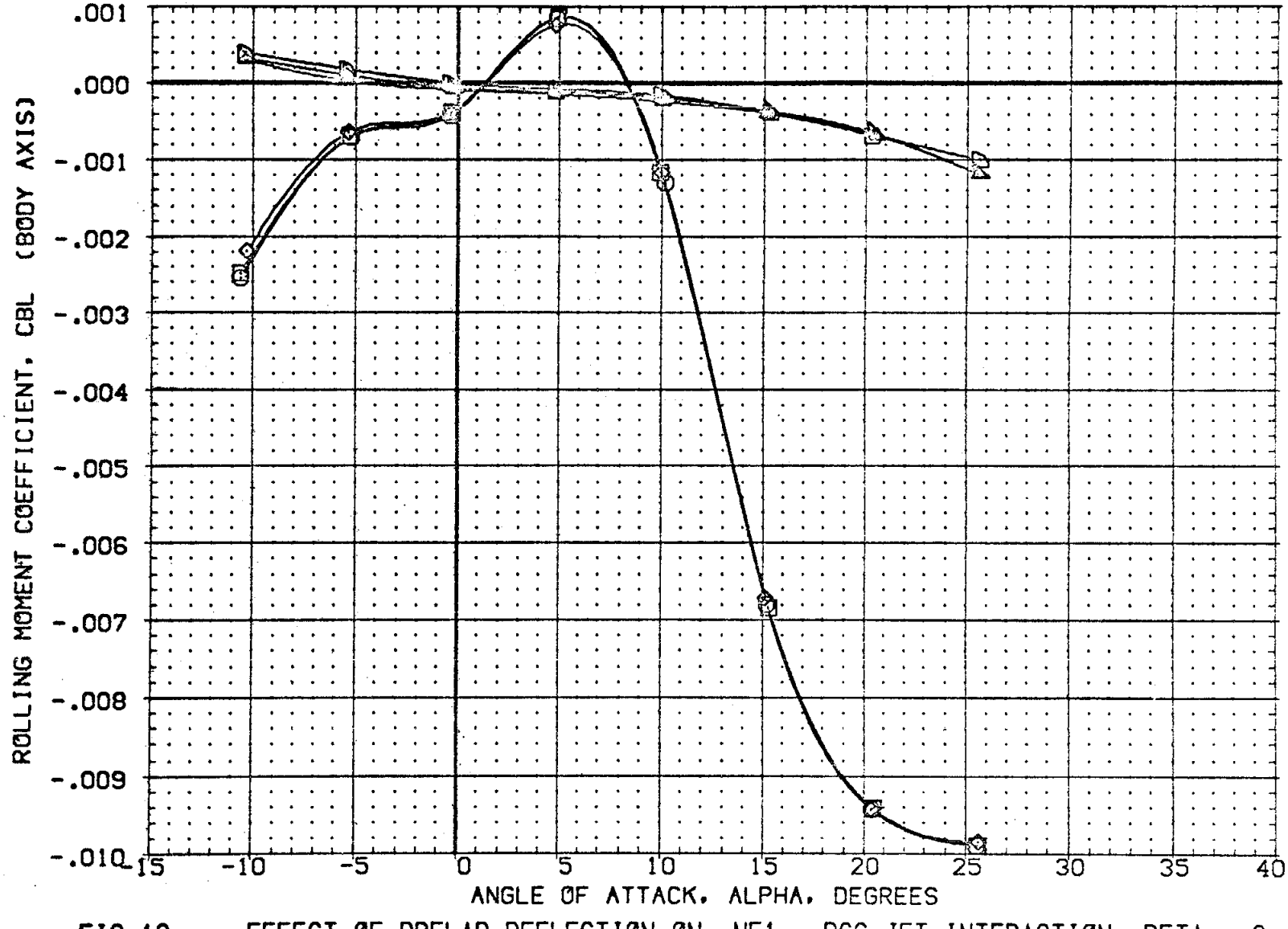


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH220N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	504.000	.000	7.000
(ZH221N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	.000	504.000	.000	7.000
(ZH203N)	◇	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	504.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	◁	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

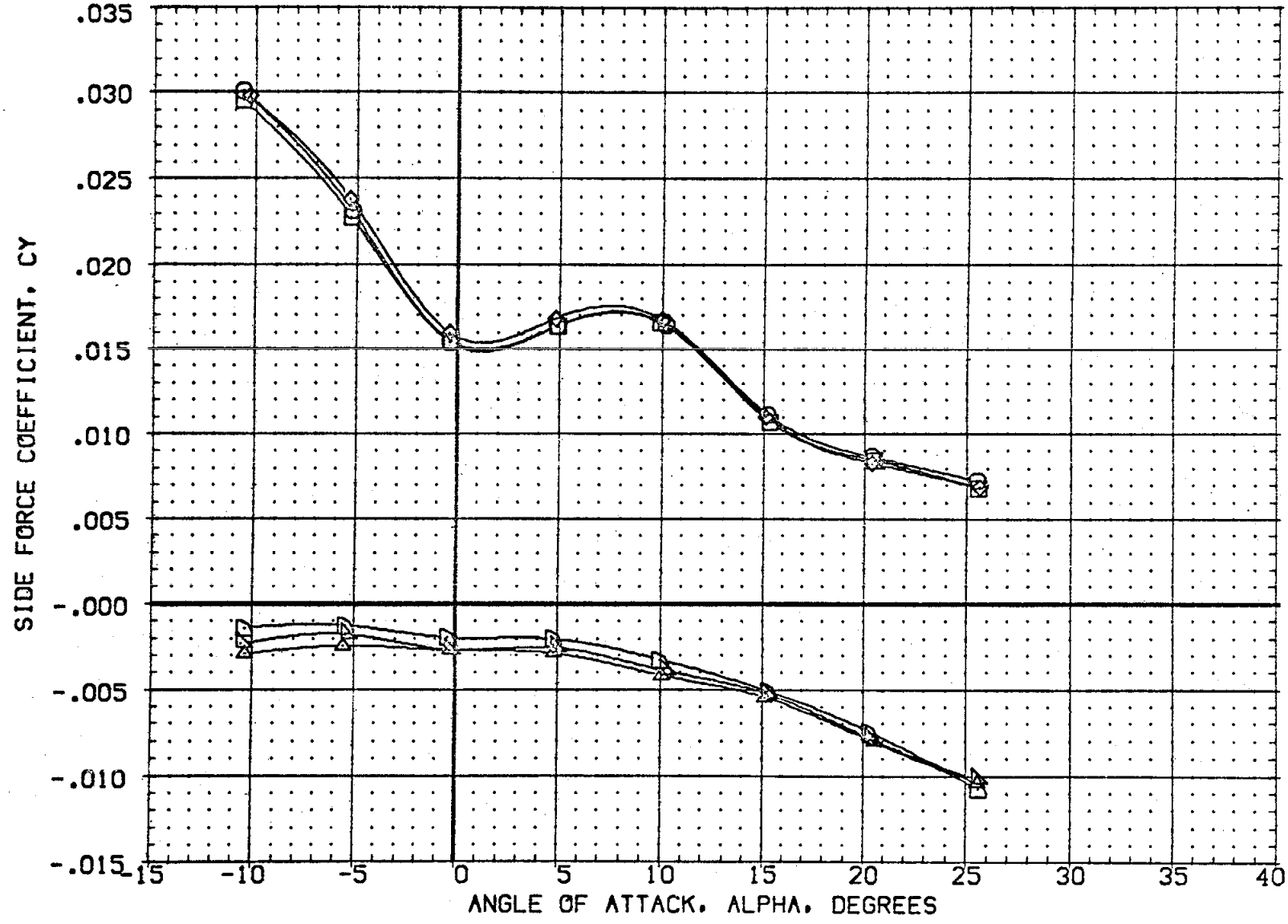


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2019)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

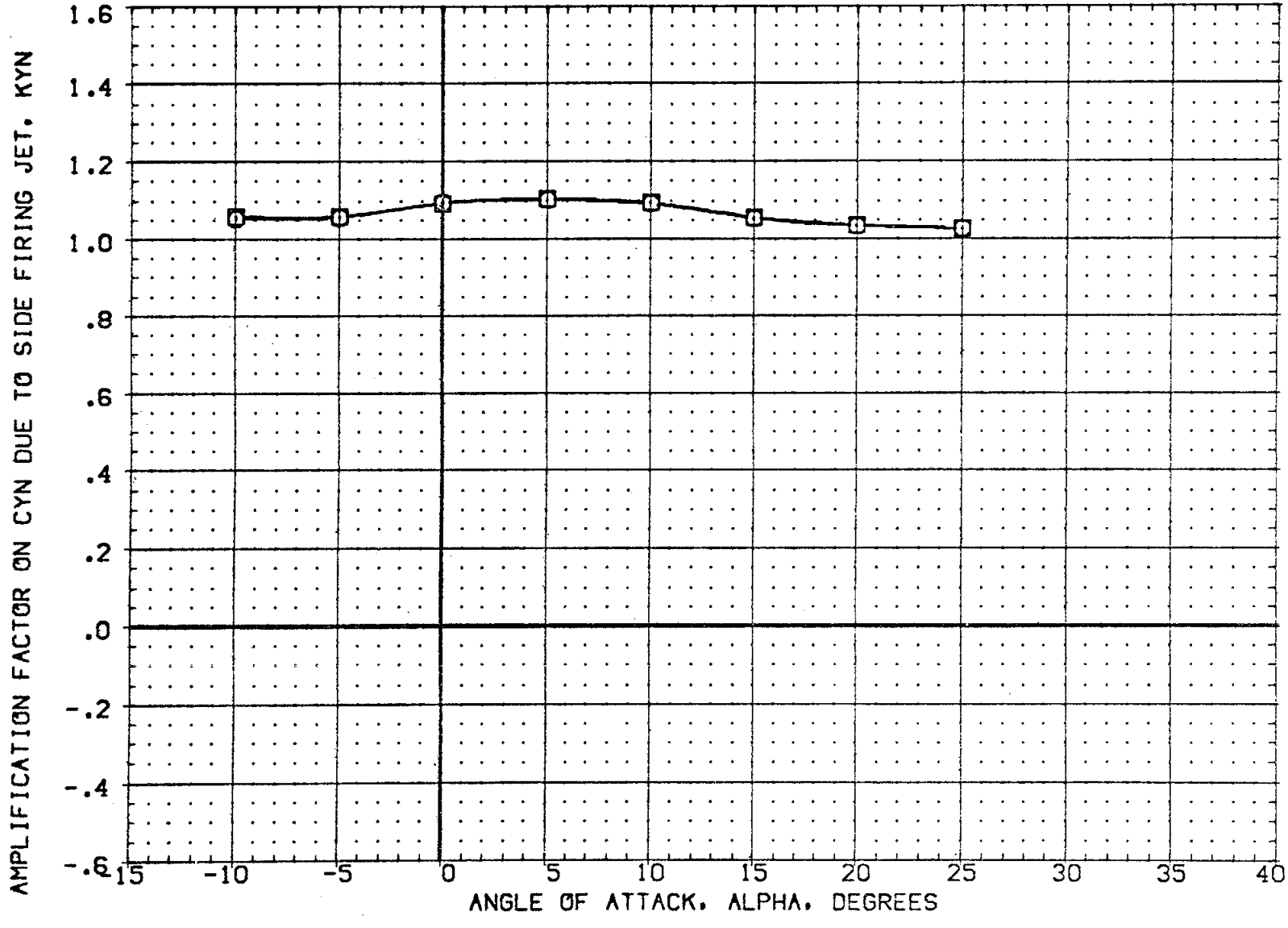


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

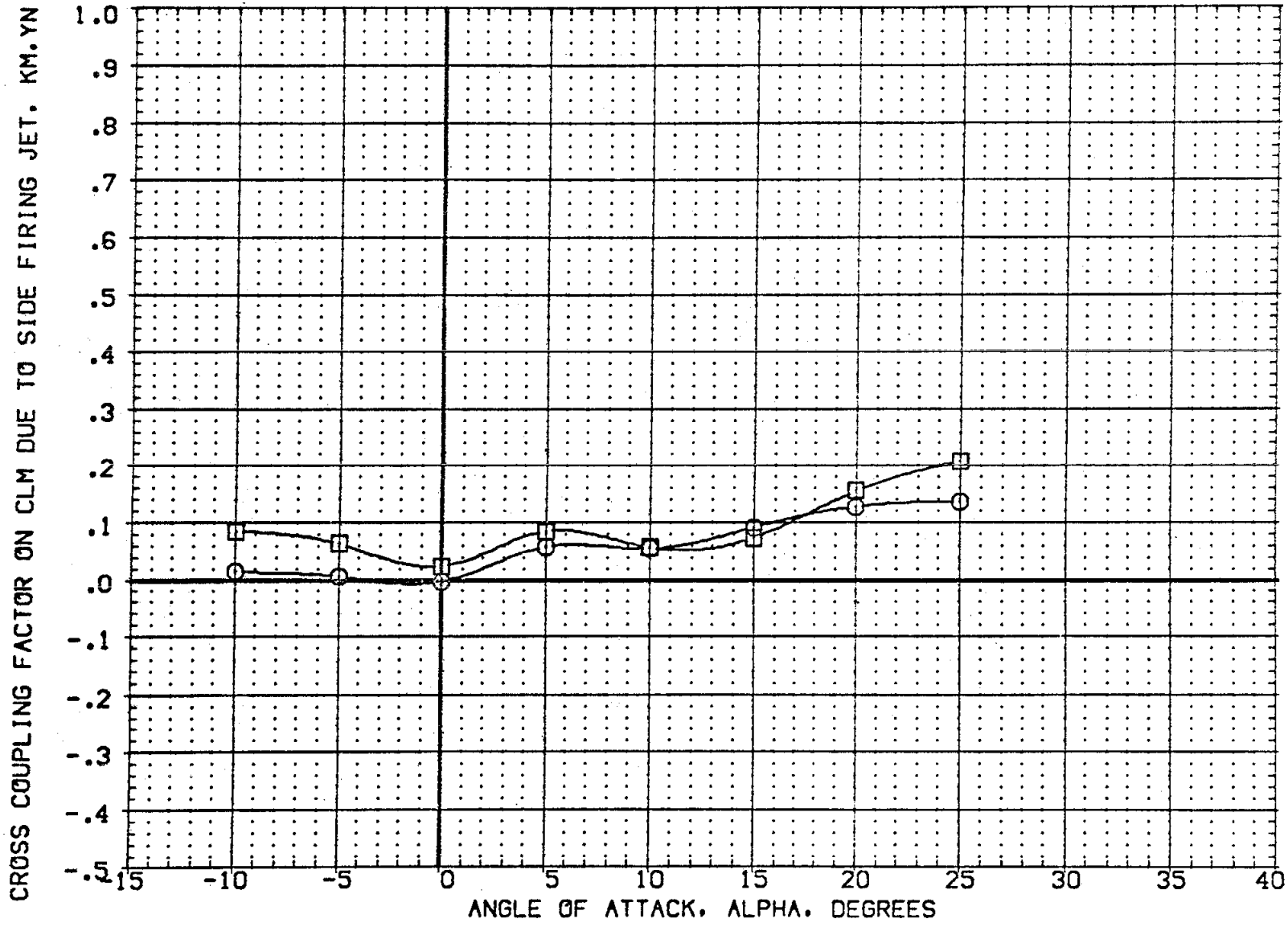


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

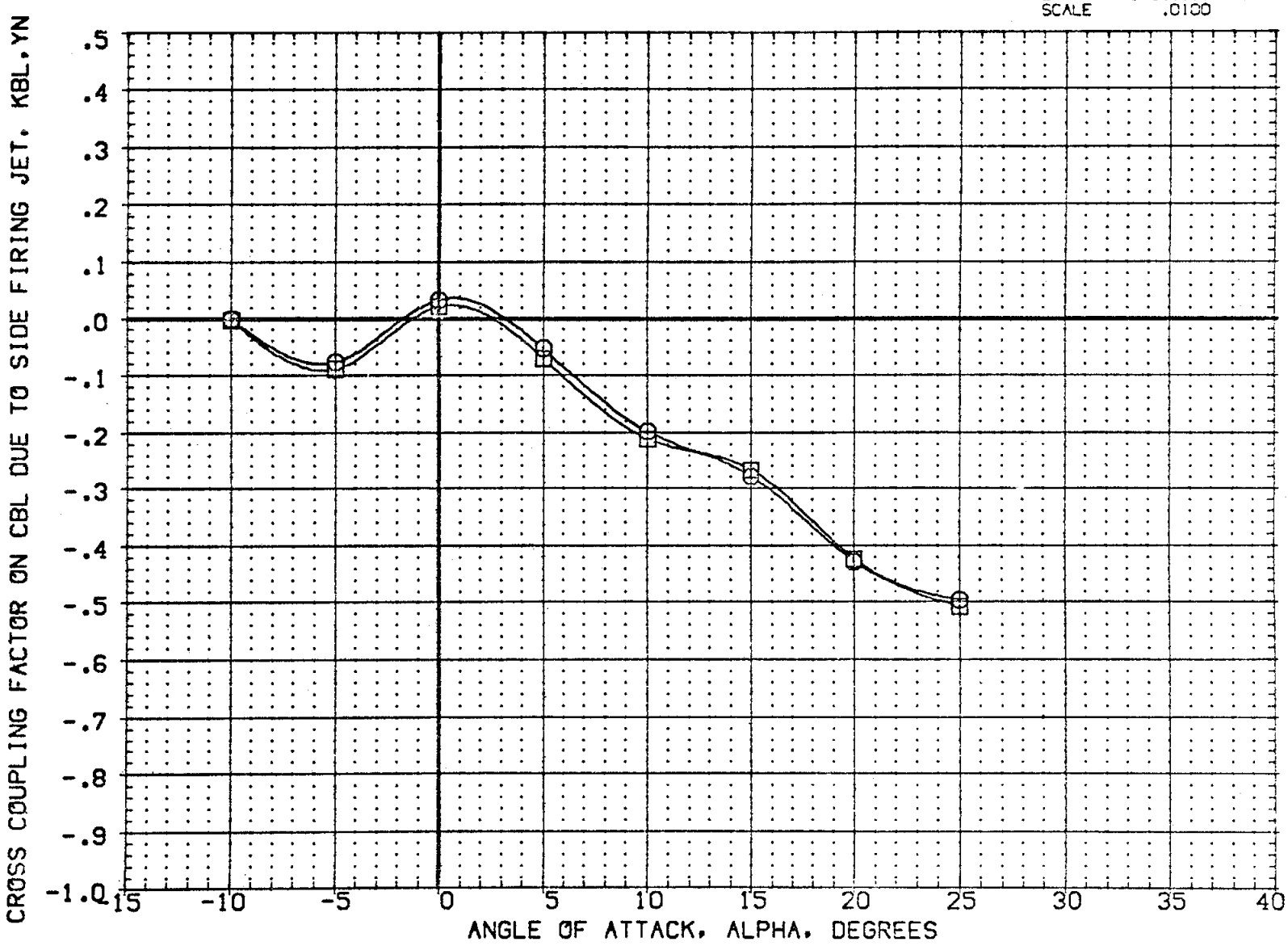


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

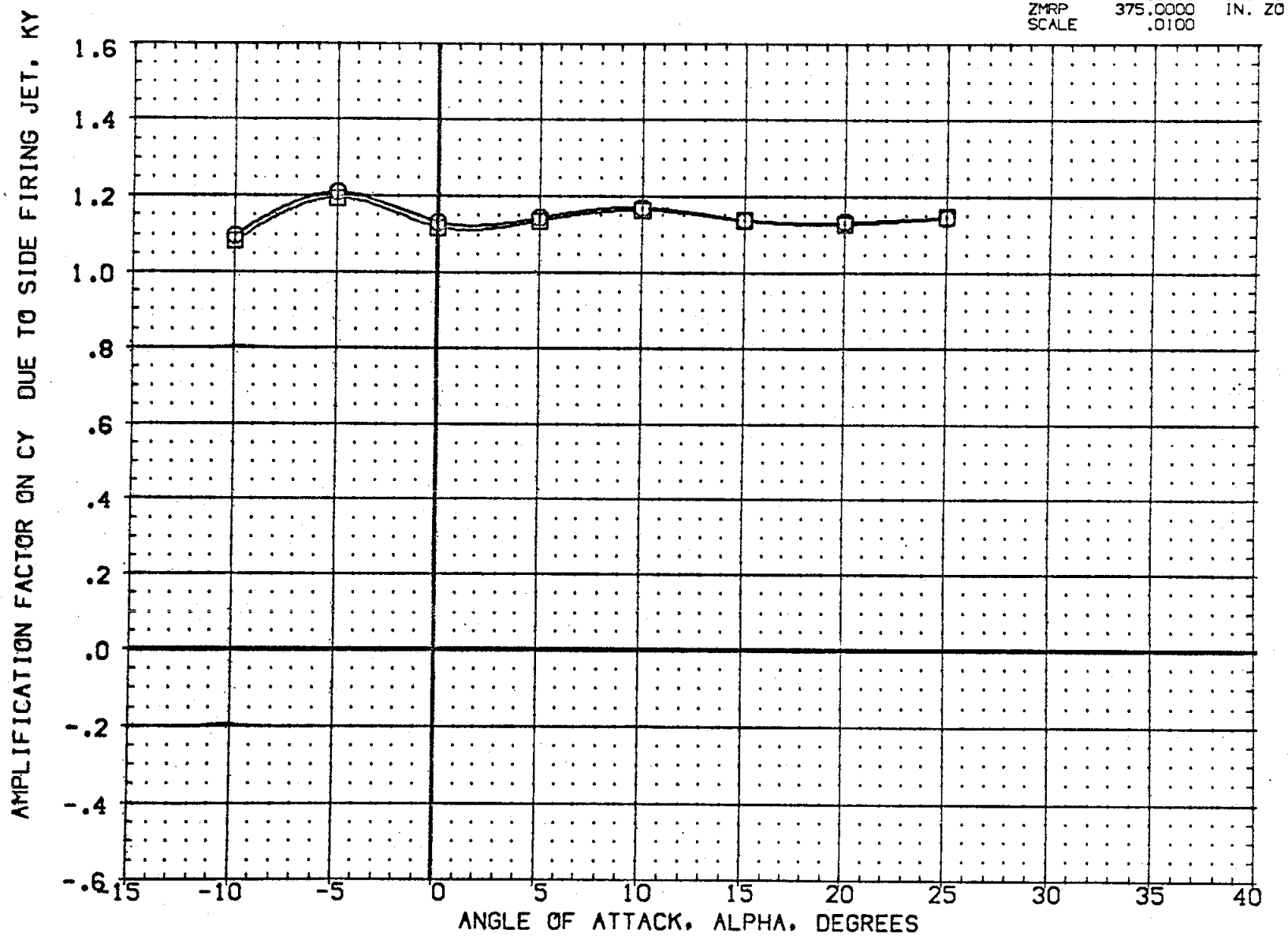


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

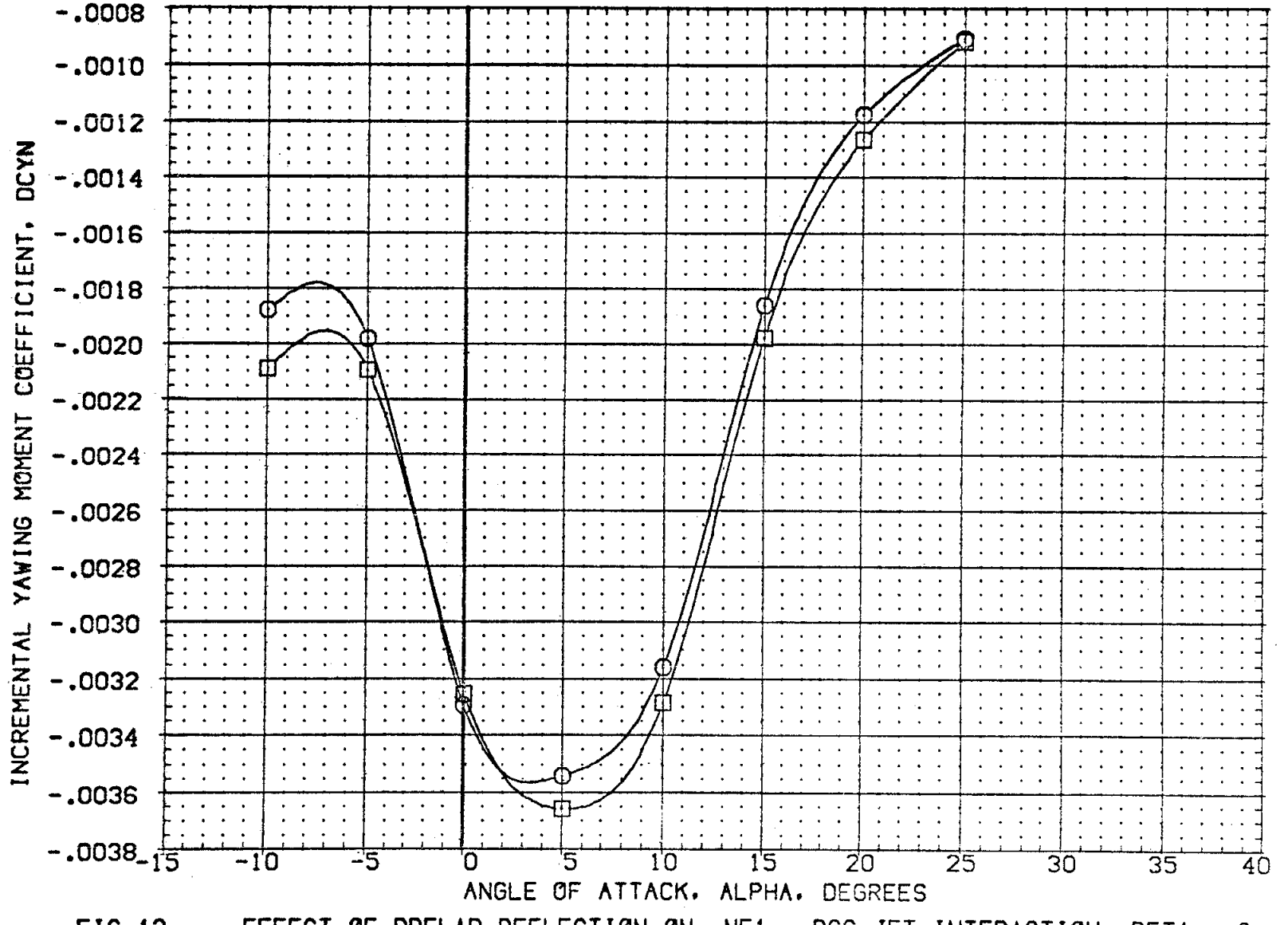


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

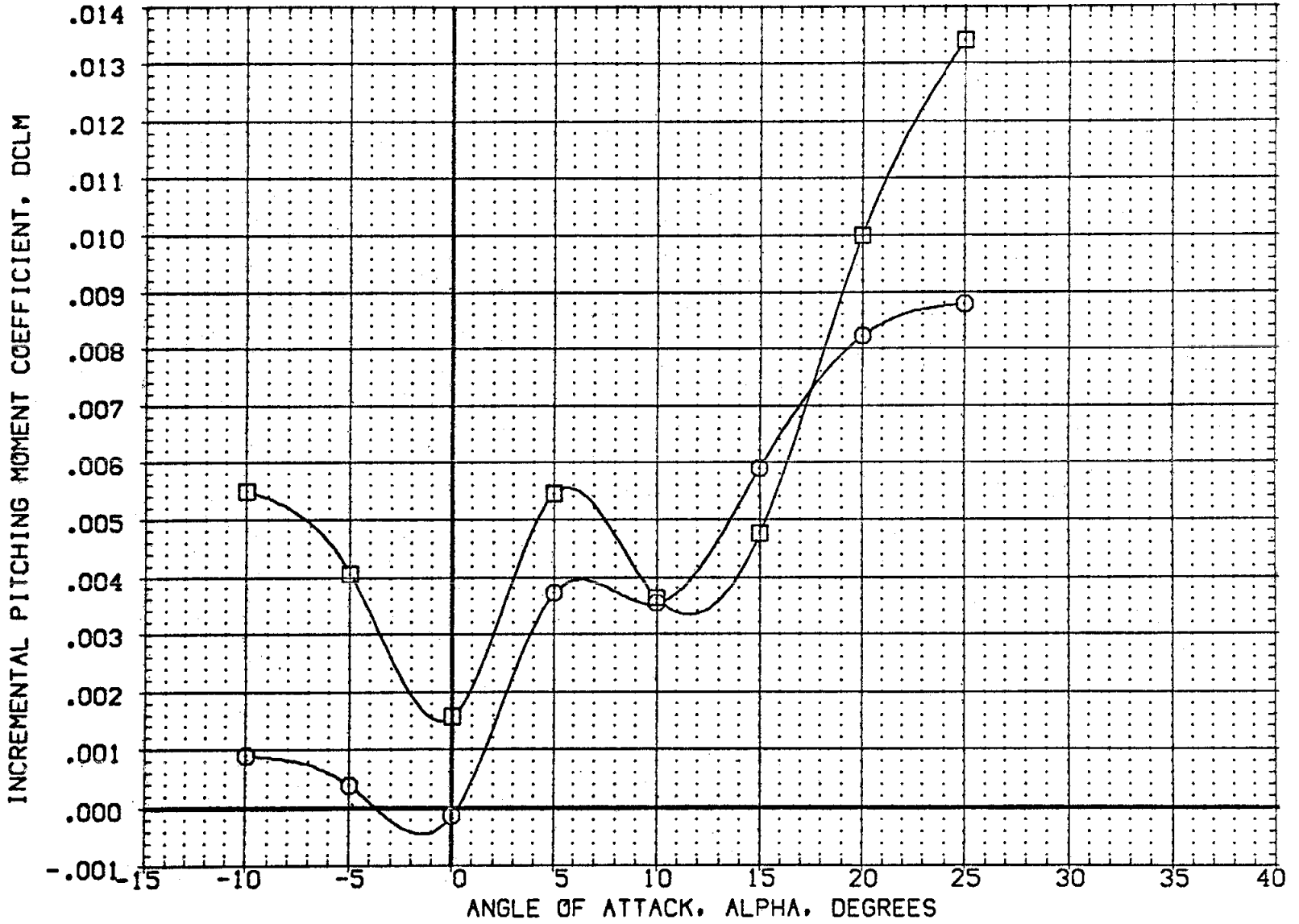


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

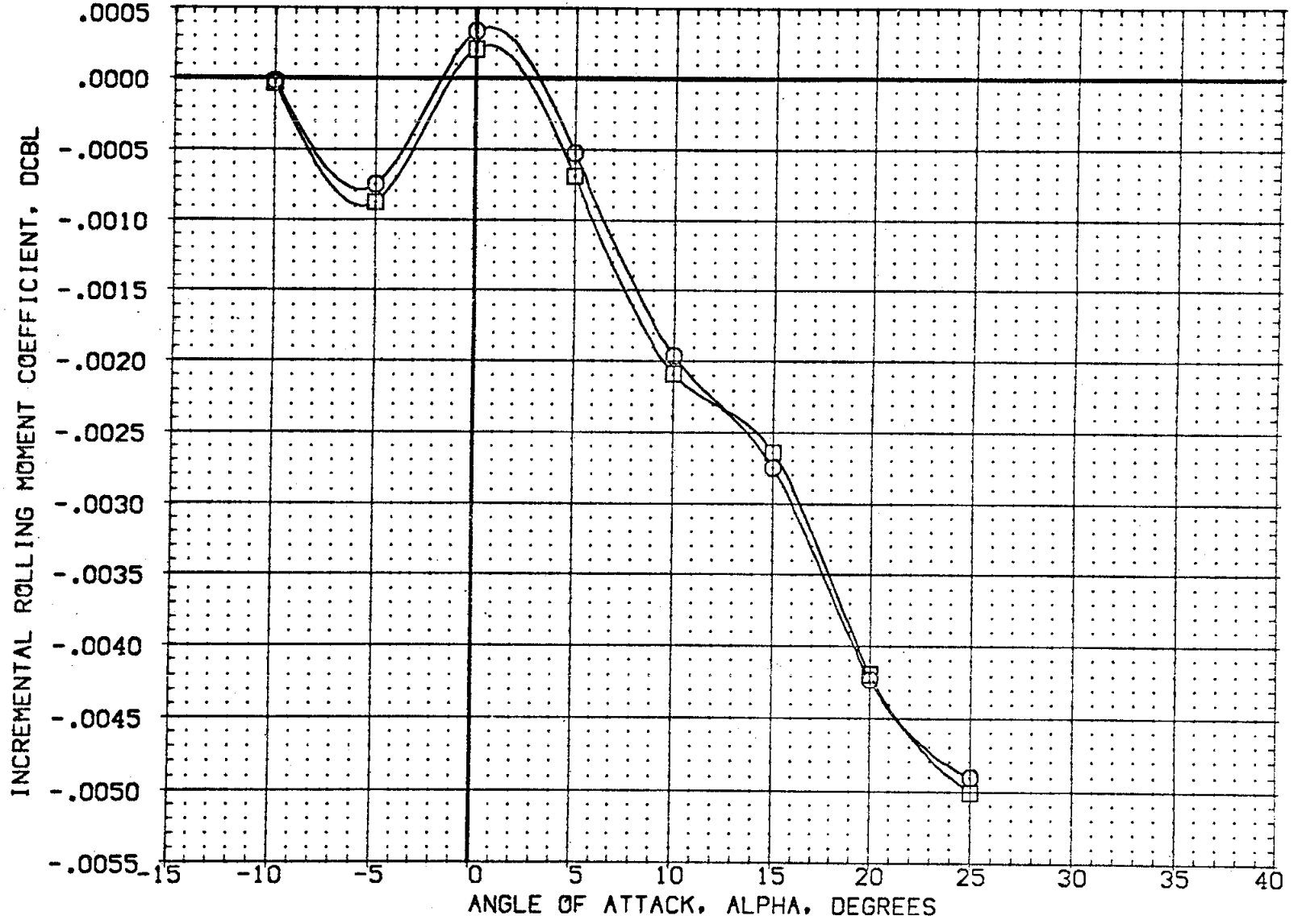


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2019) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(CH2002) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

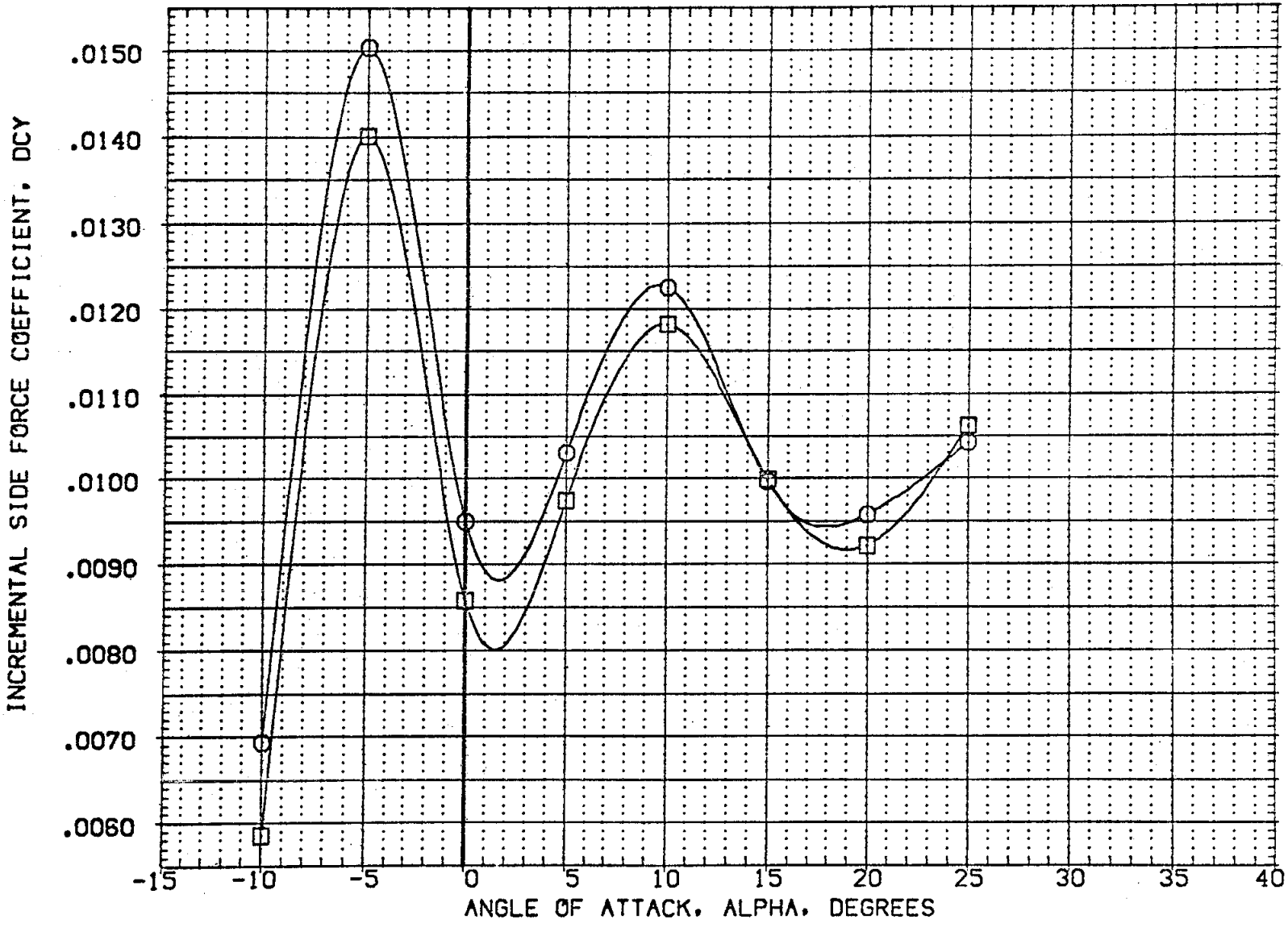


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH219N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(ZH202N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000
(ZH202F)	⊠	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH201F)	△	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

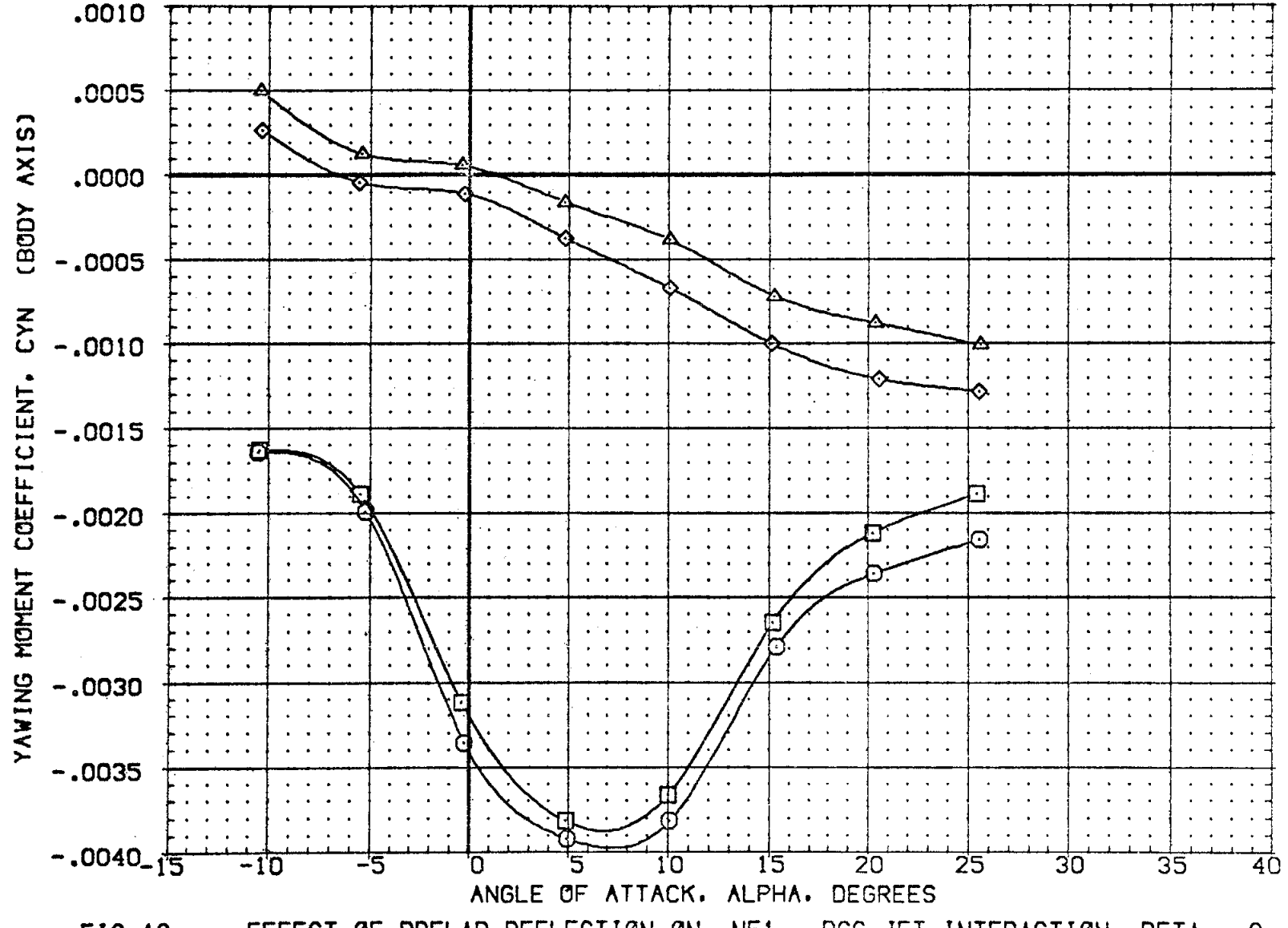


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH219N)	○	0A10S CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(ZH202N)	□	0A10S CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000
(ZH202F)	◇	0A10S CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH201F)	△	0A10S CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

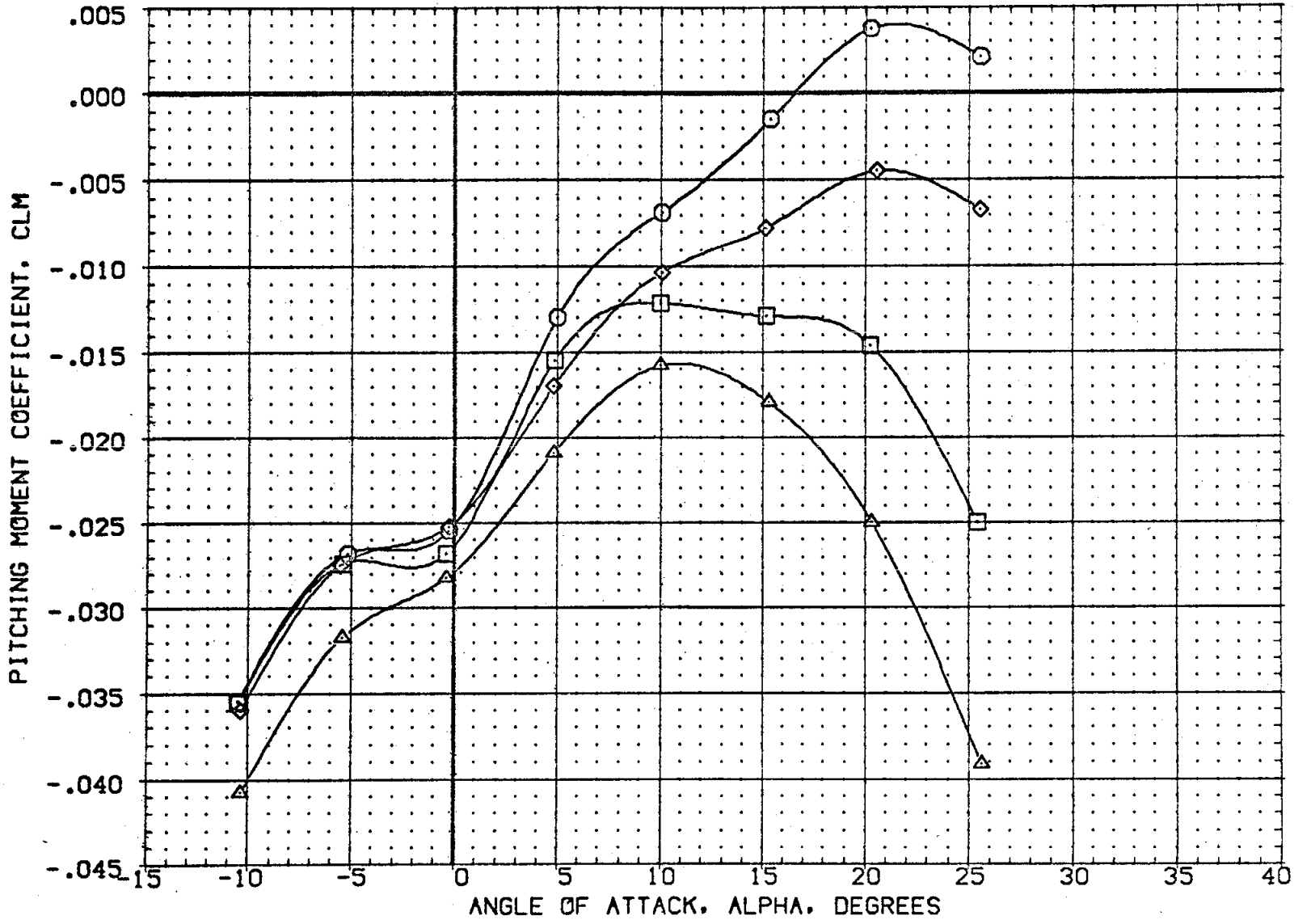


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BOFLAP	PCRCS	ELEVON	Q-SIM
(ZH219N) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(ZH202N) □	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000
(ZH202F) ◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH201F) △	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

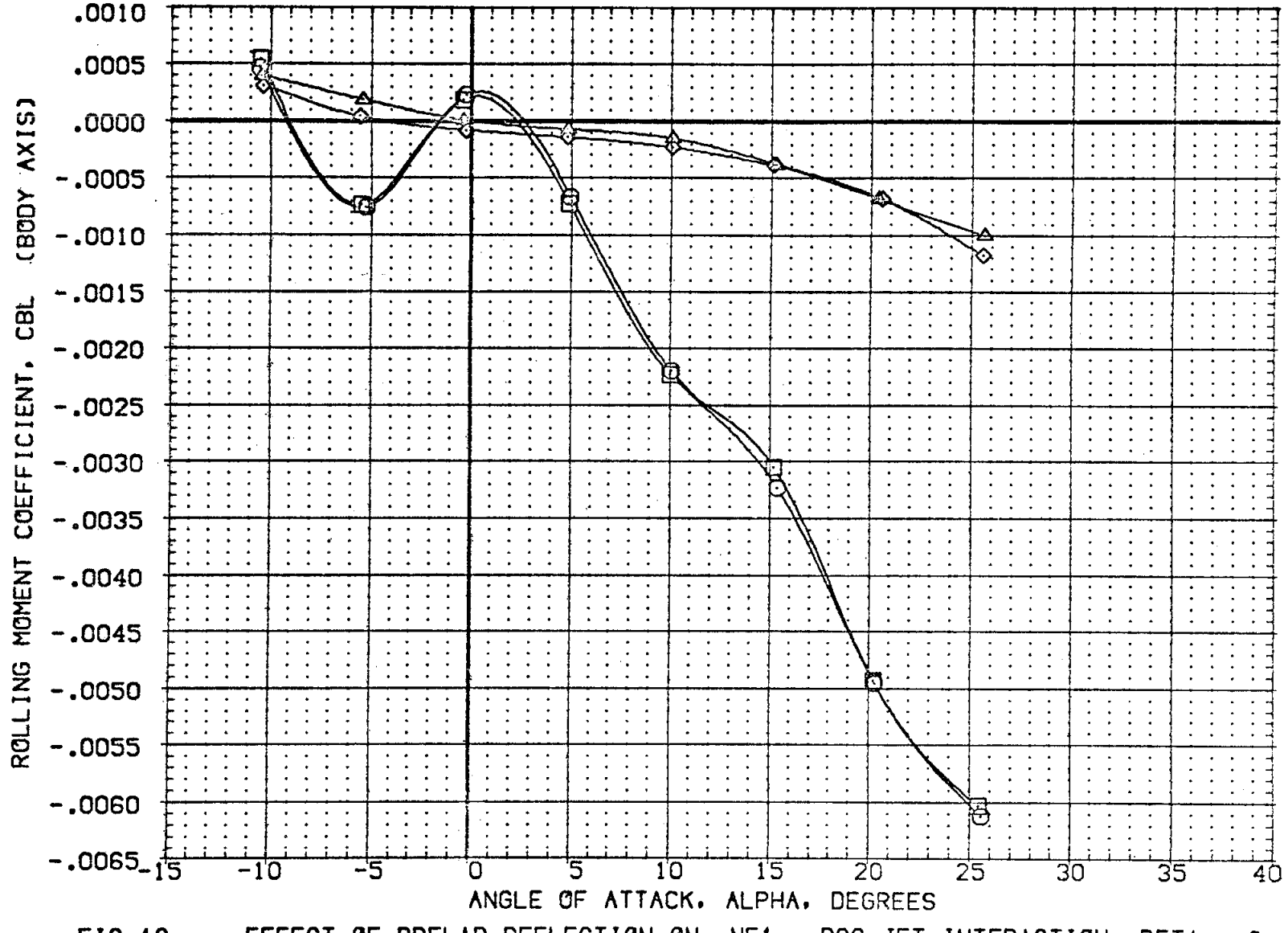


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH219N)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	-14.250	179.000	.000	20.000
(ZH202N)	□	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	179.000	.000	20.000
(ZH202F)	◇	0A105 CFHT109 MODEL 32 0(0) NNS2	RCS OFF	-14.250	.000	.000	.000
(ZH201F)	△	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

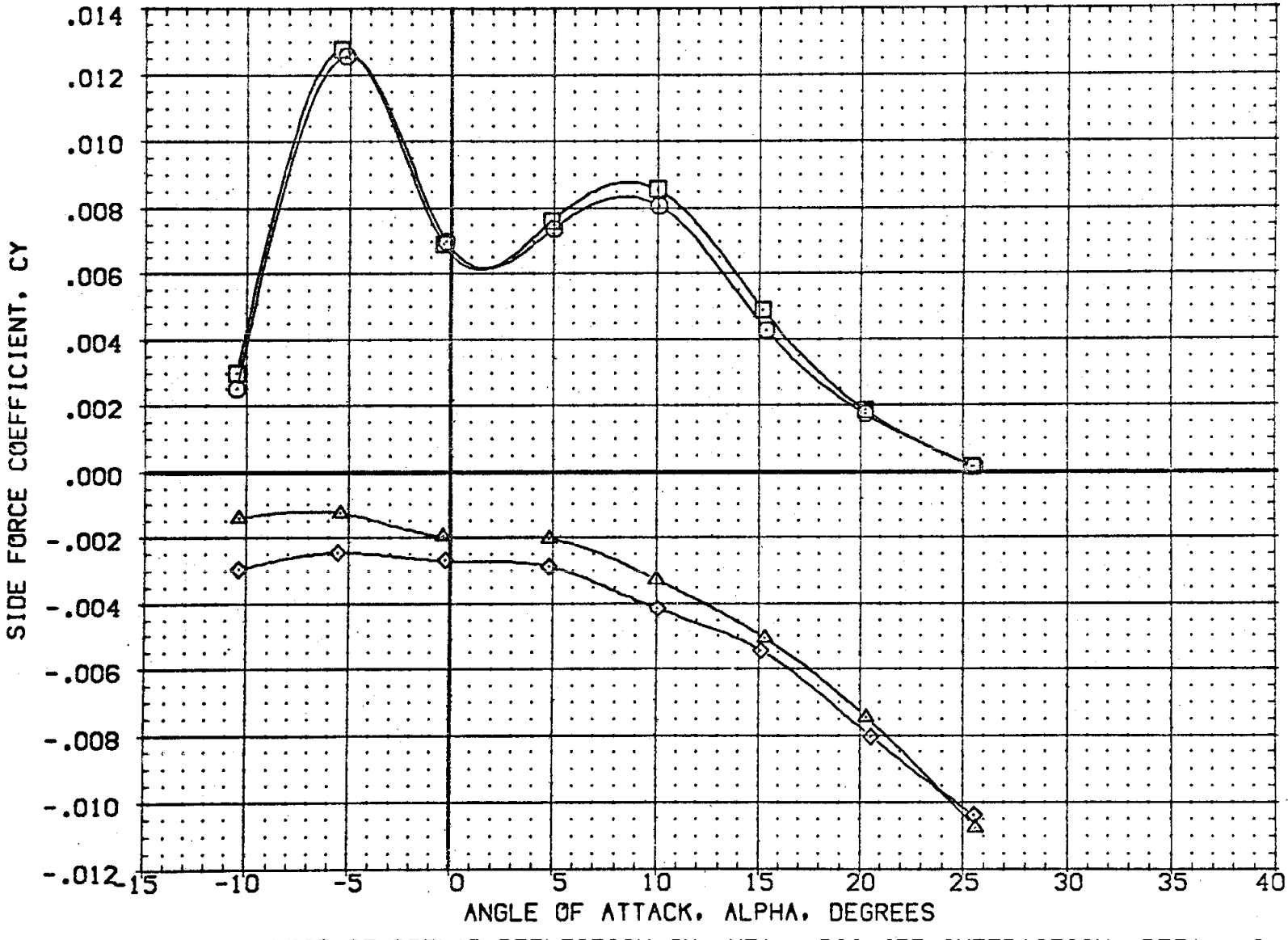


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

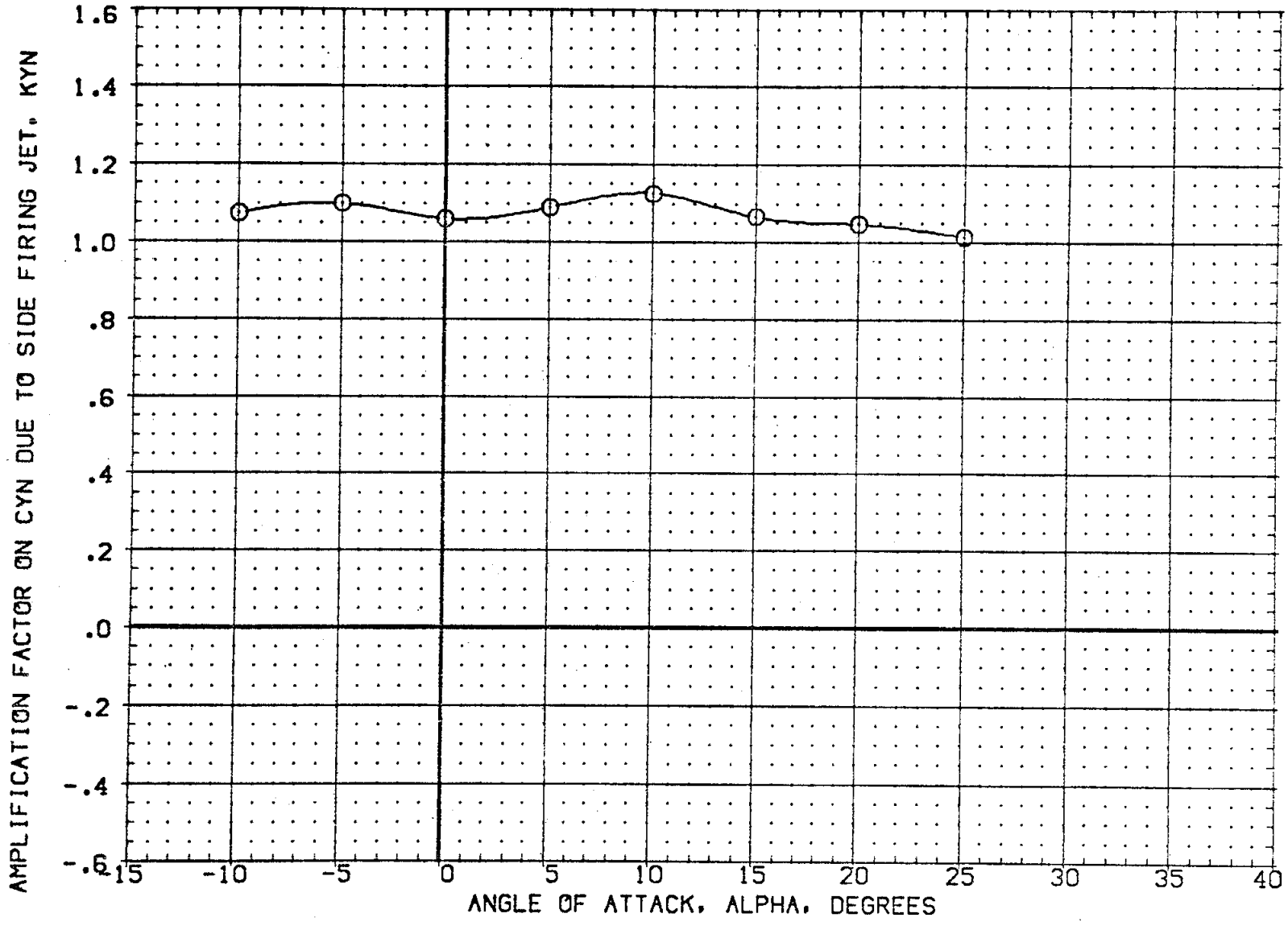


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN,
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

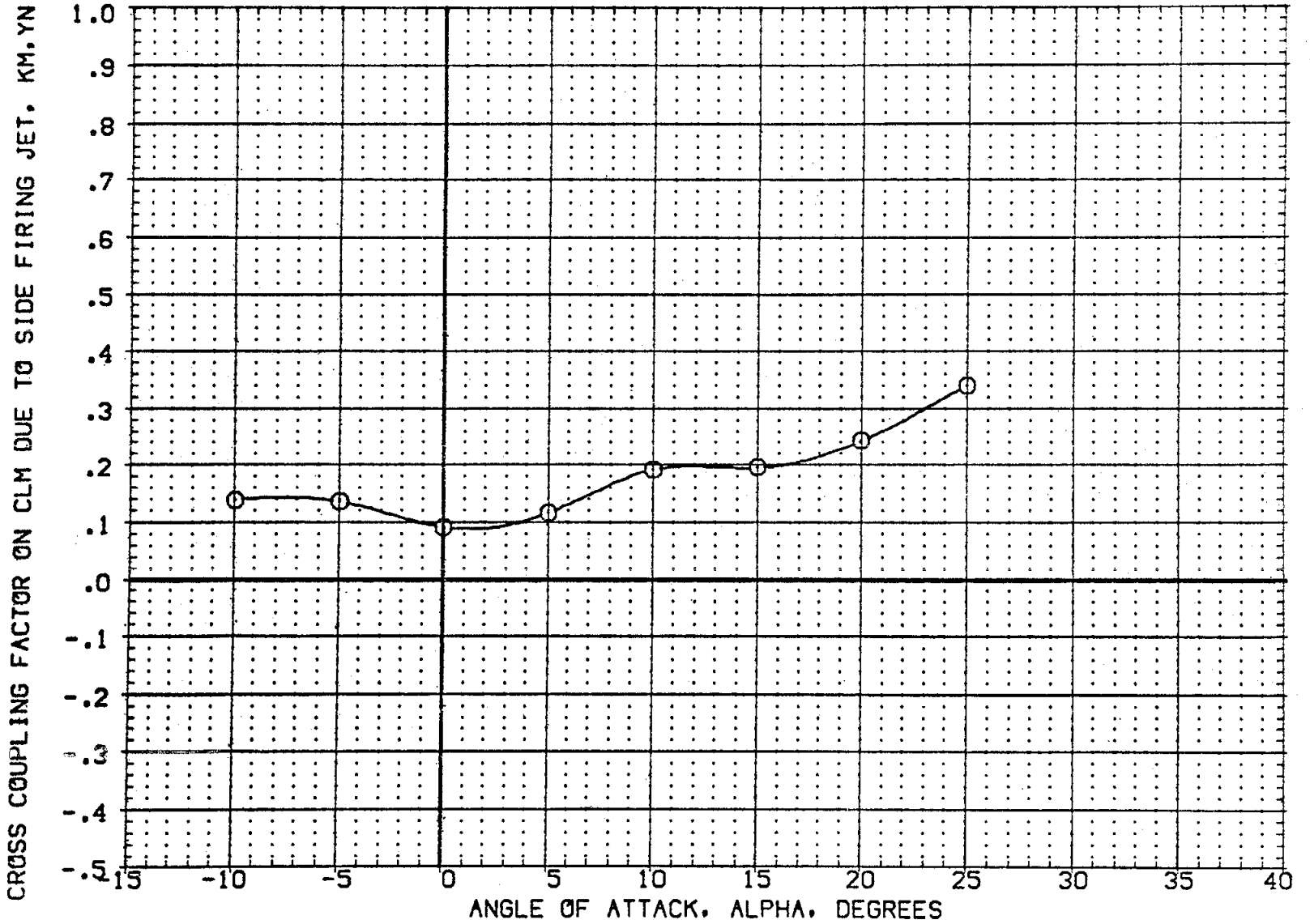


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

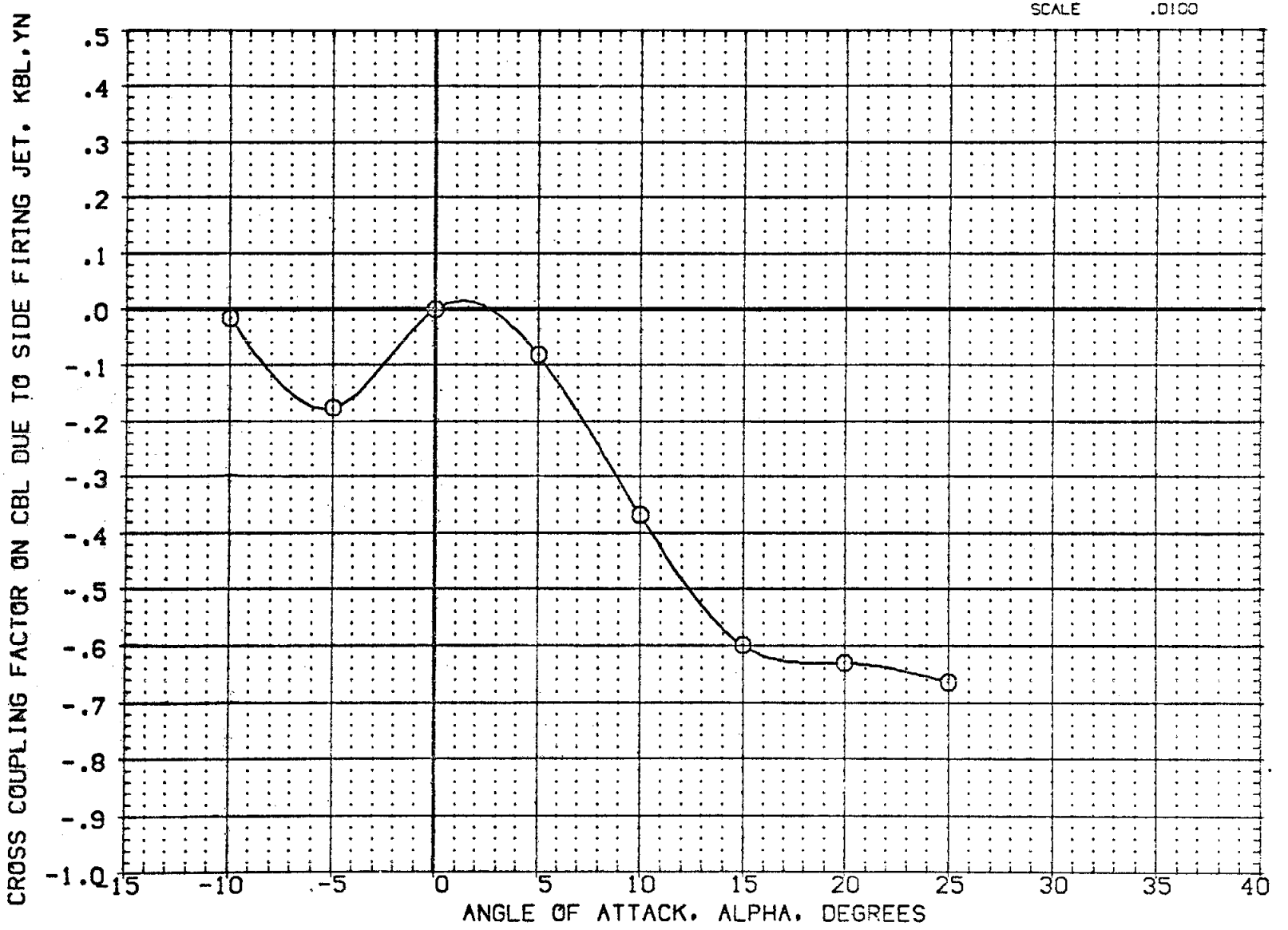


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6900	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

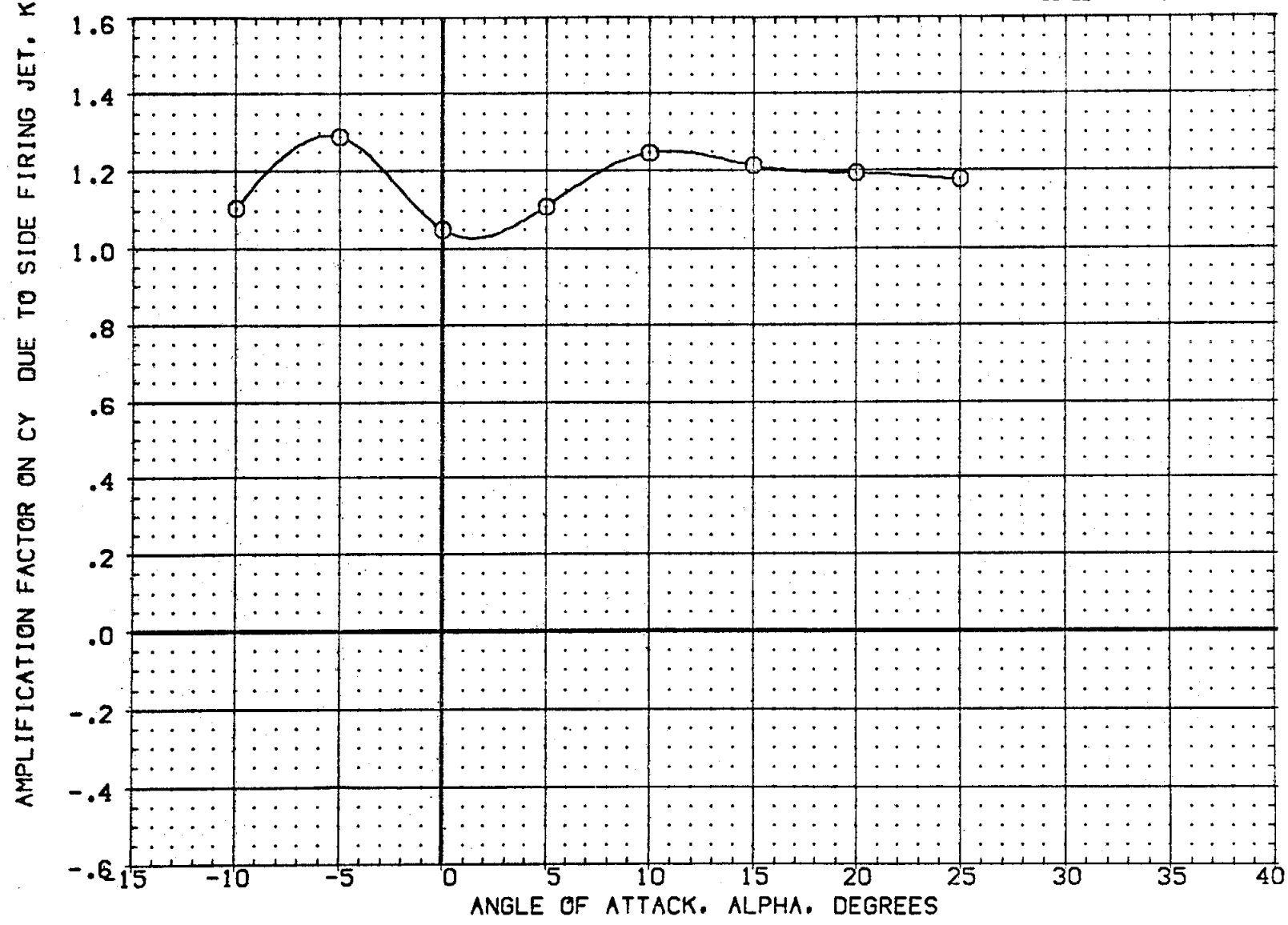


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001) ○	0A10S CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

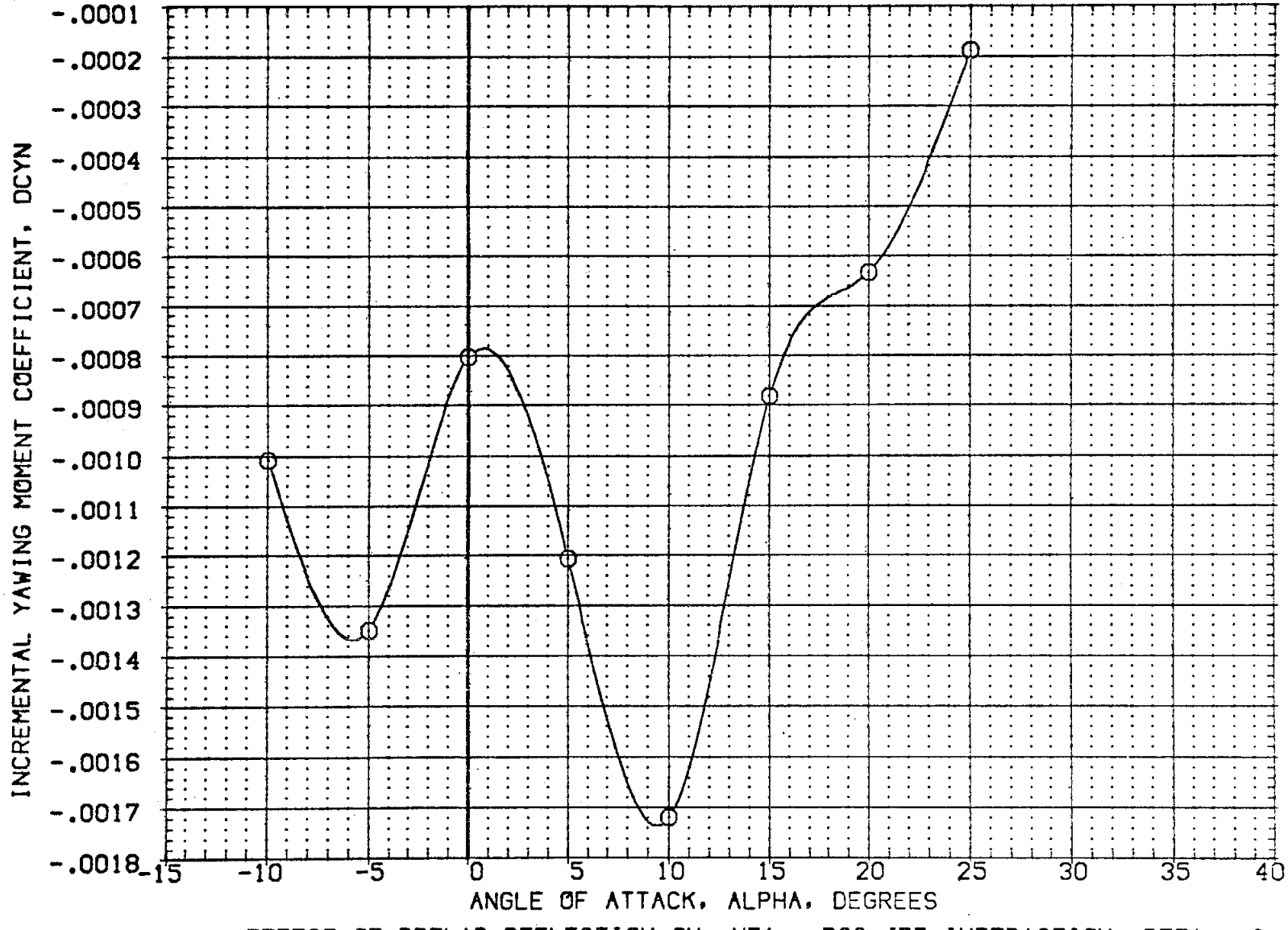


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2001) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

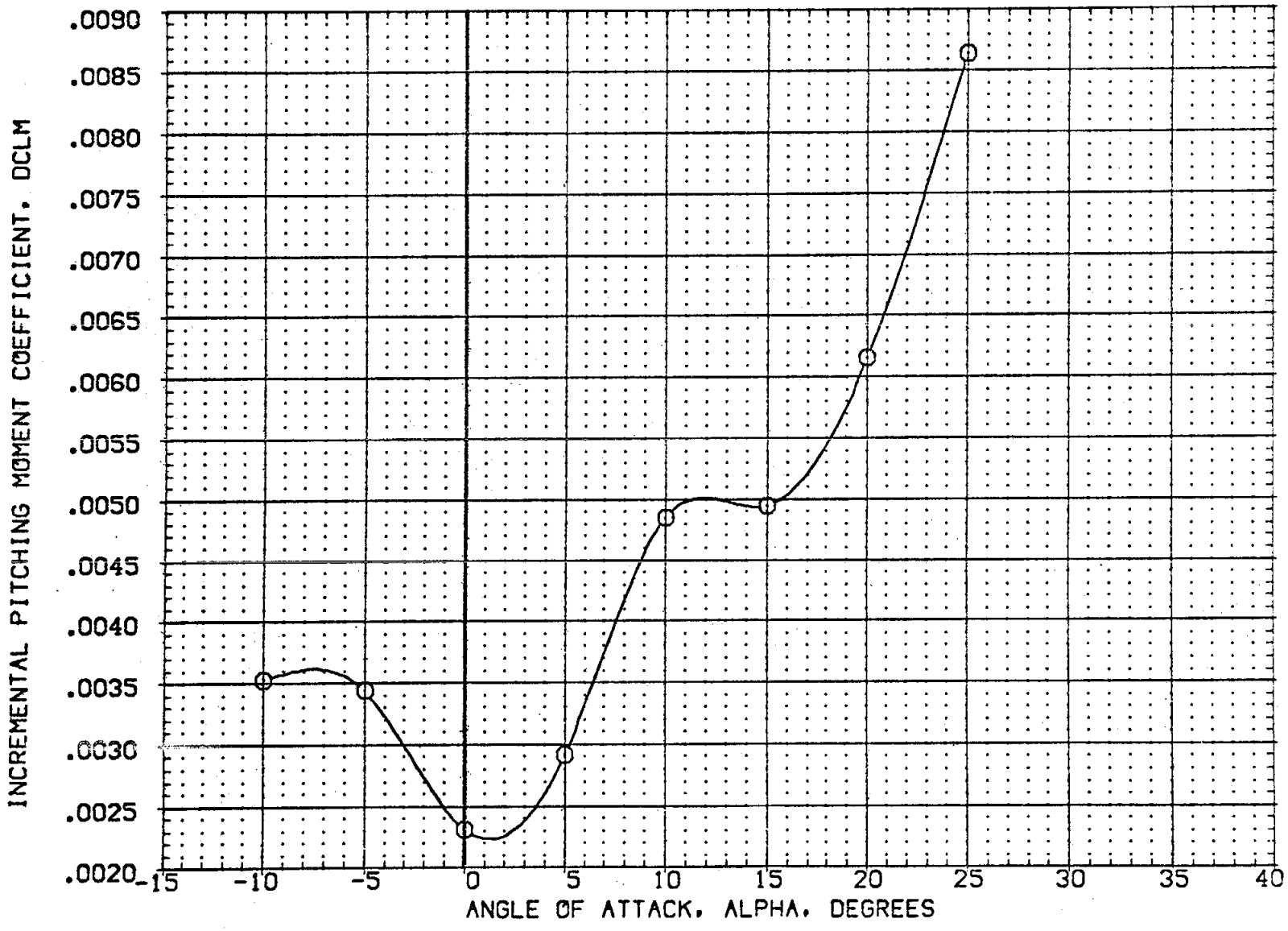


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

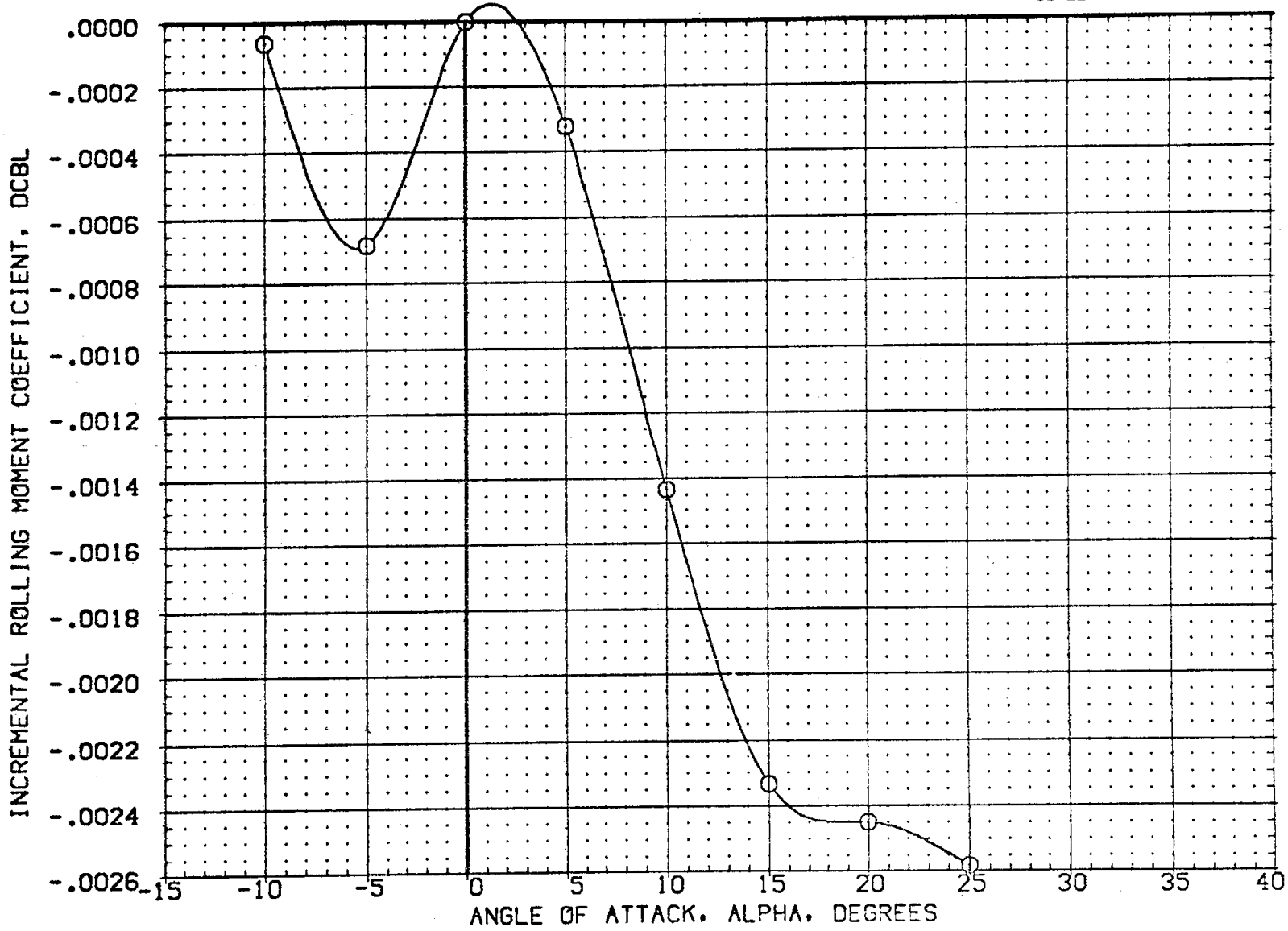


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2001)	○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

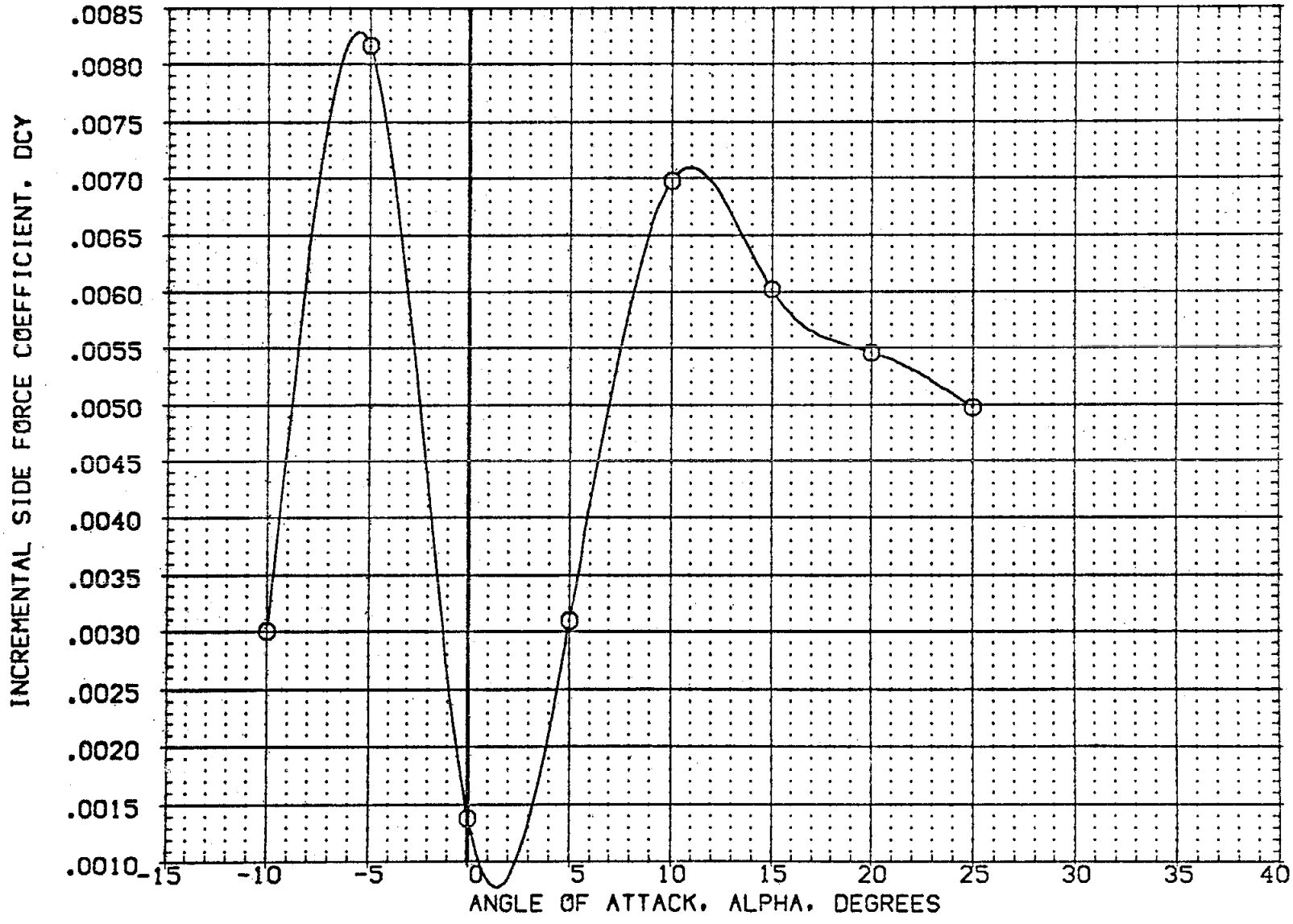


FIG 13 EFFECT ØF BDFLAP DEFLECTIØN ØN N51 RCS JET INTERACTIØN, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH20IN)	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000
(ZH20IF)	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

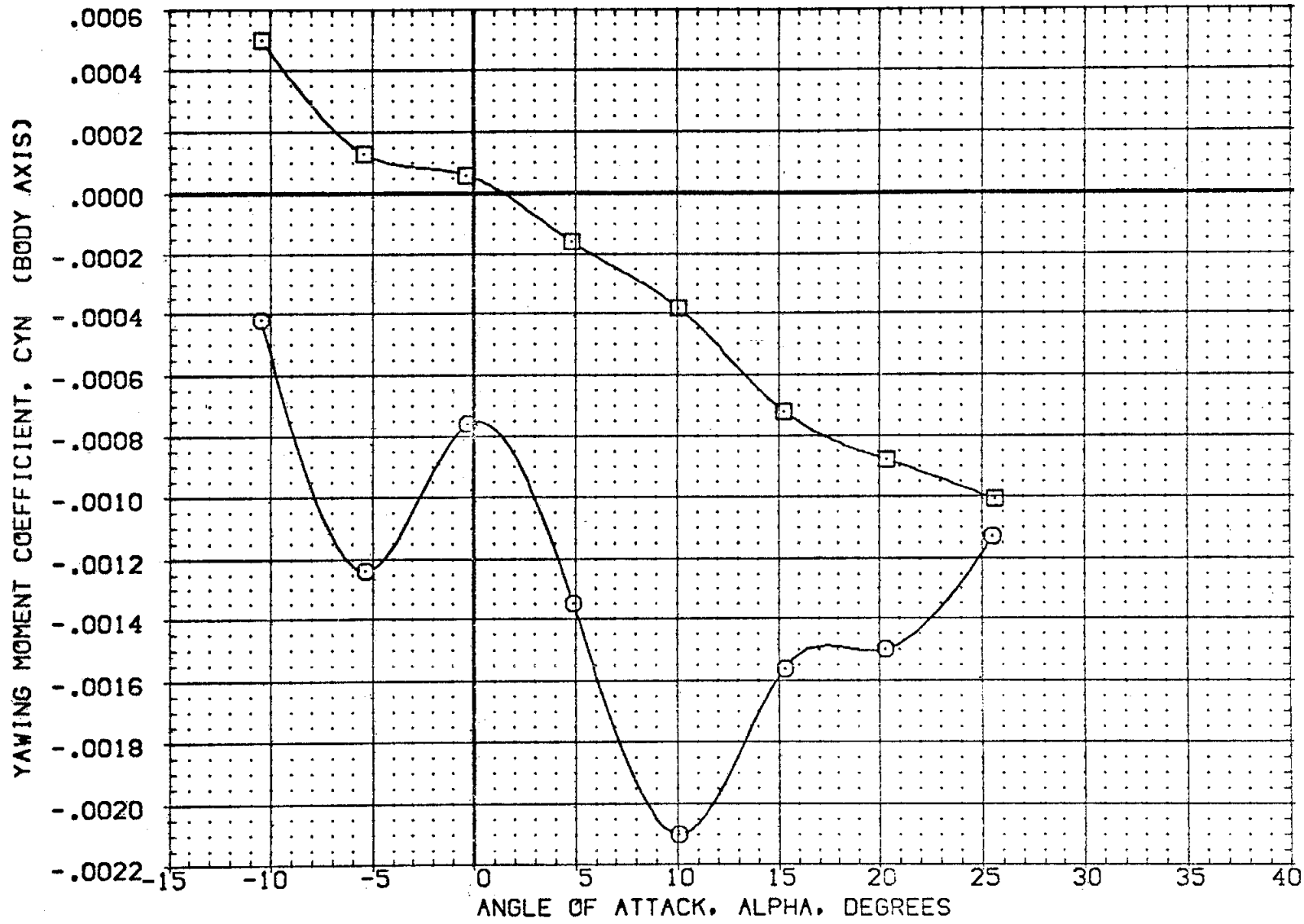


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH20IN)	○	0A10S CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000
(ZH20IF)	□	0A10S CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

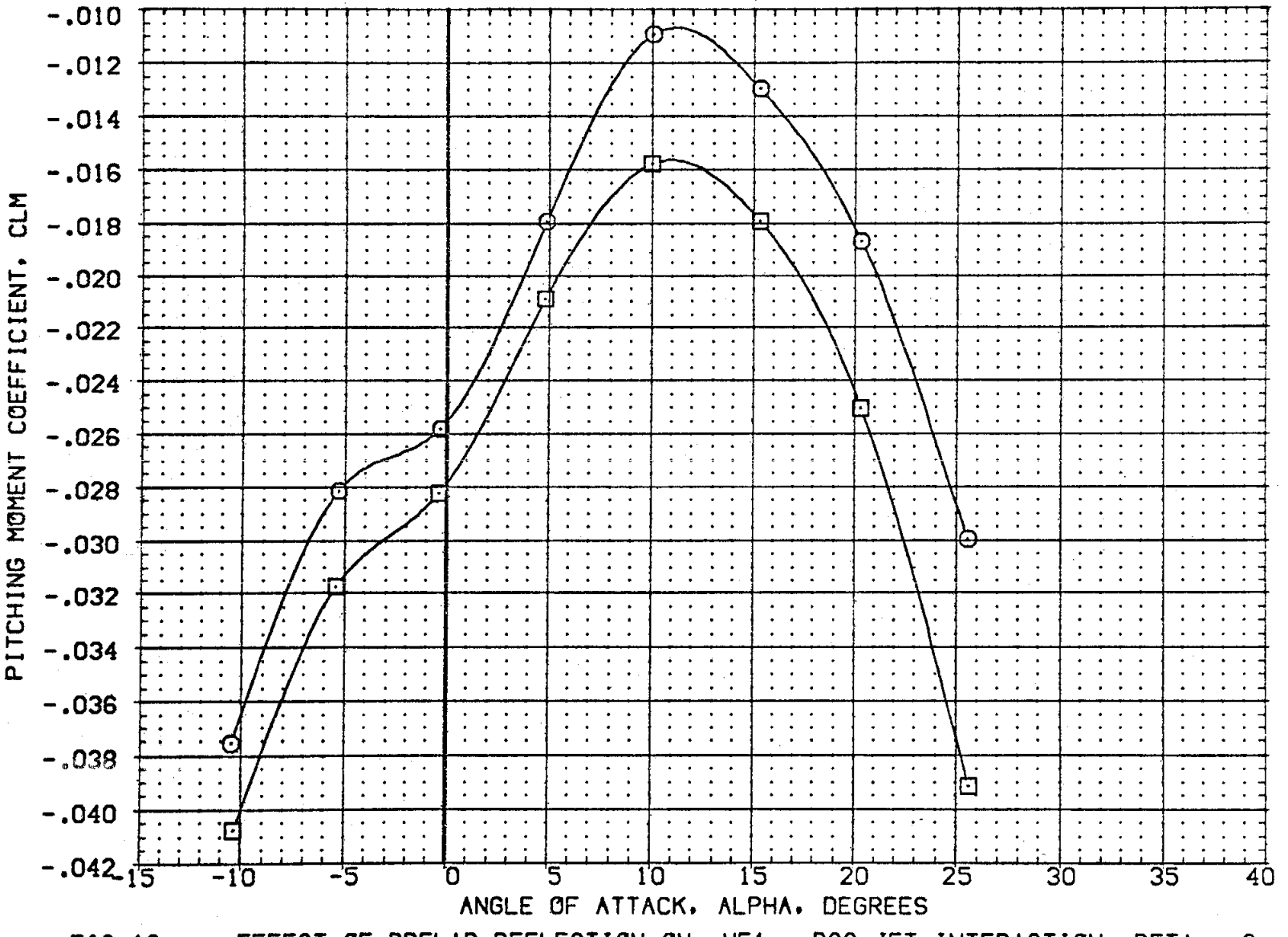


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH201N) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAV	13.750	72.000	.000	50.000
(ZH201F) □	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

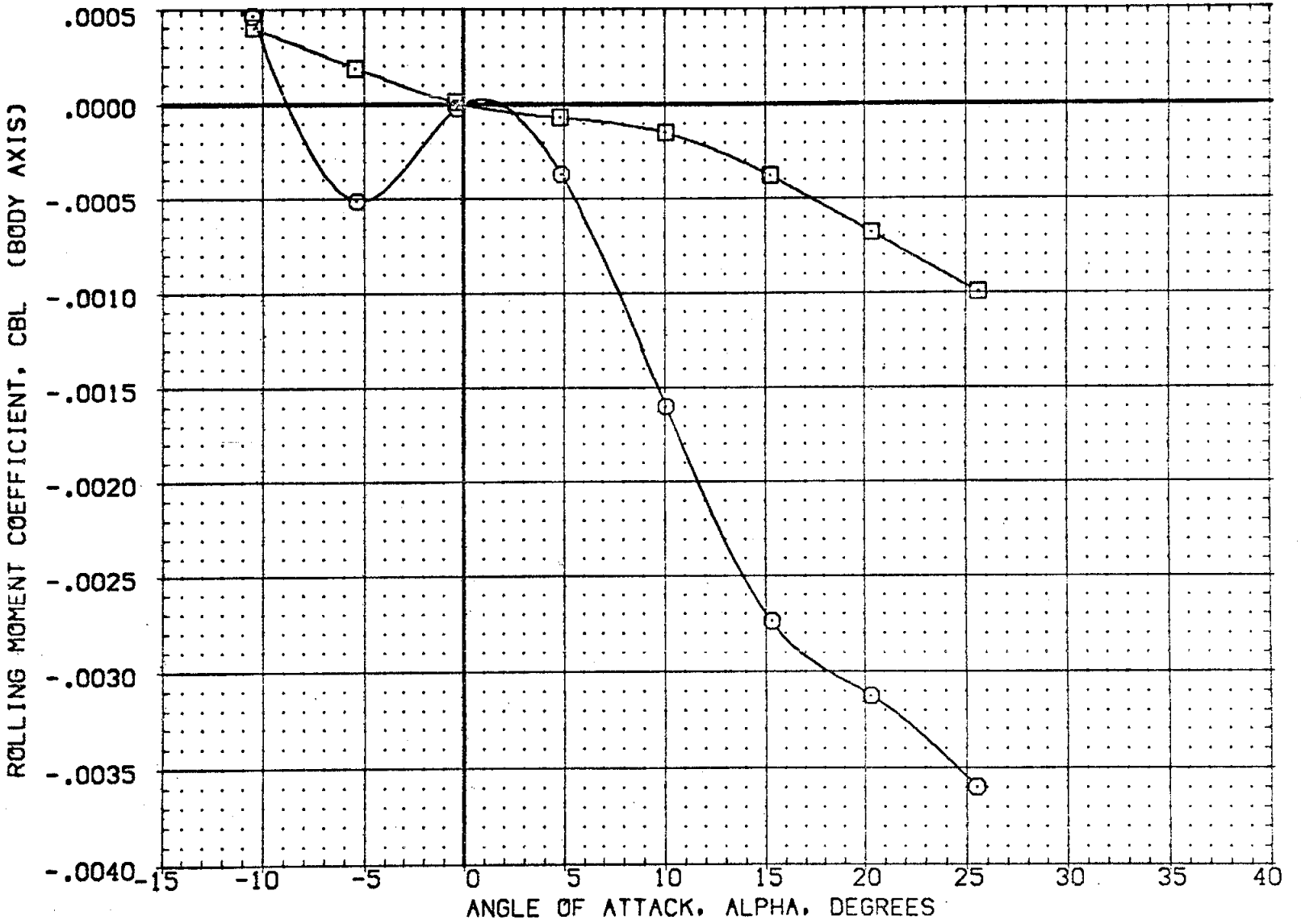


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH20IN) ○	0A105 CFHT109 MODEL 32-0 (0)N51	YAW	13.750	72.000	.000	50.000
(ZH20IF) □	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

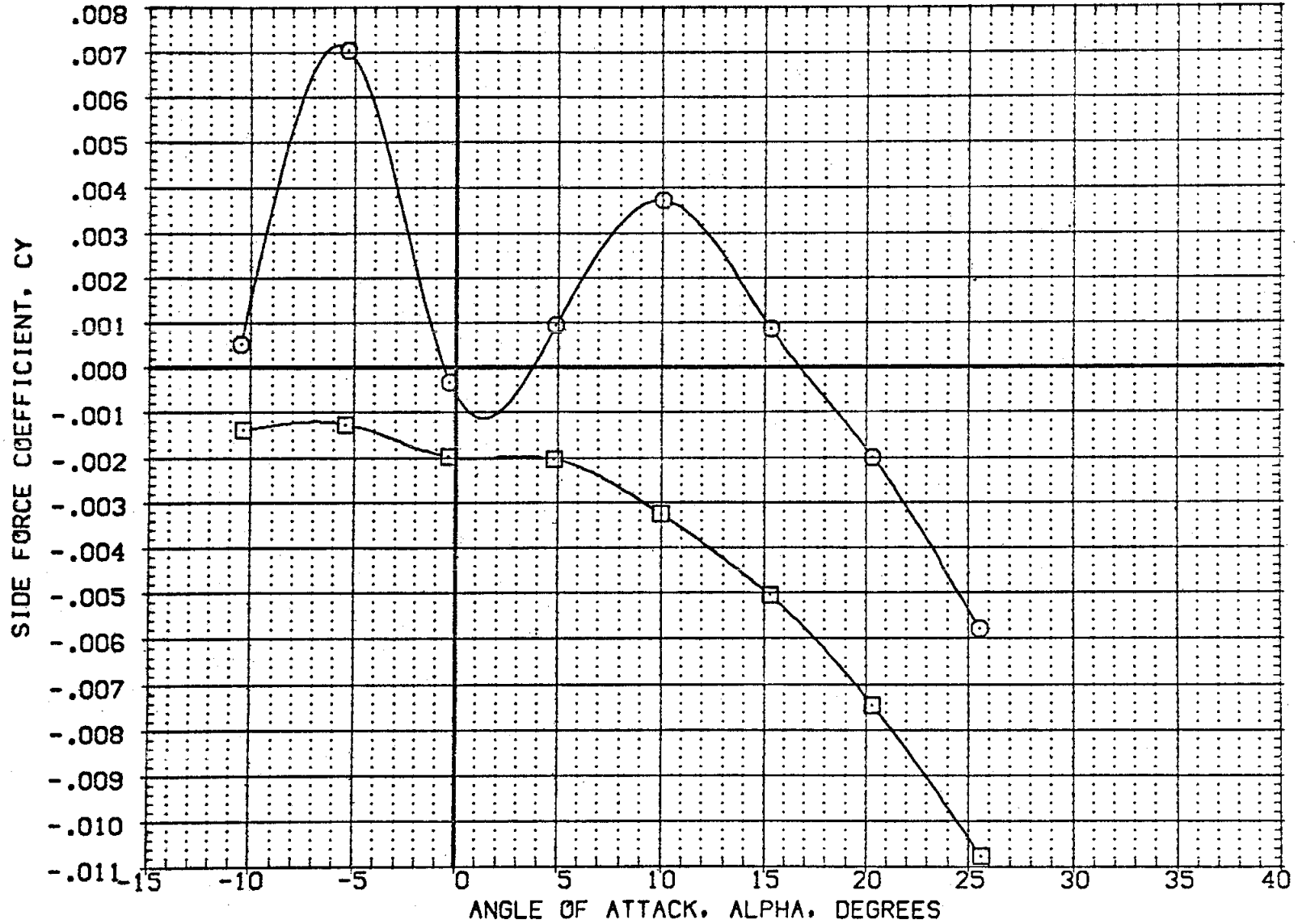


FIG 13 EFFECT OF BDFLAP DEFLECTION ON N51 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2028)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

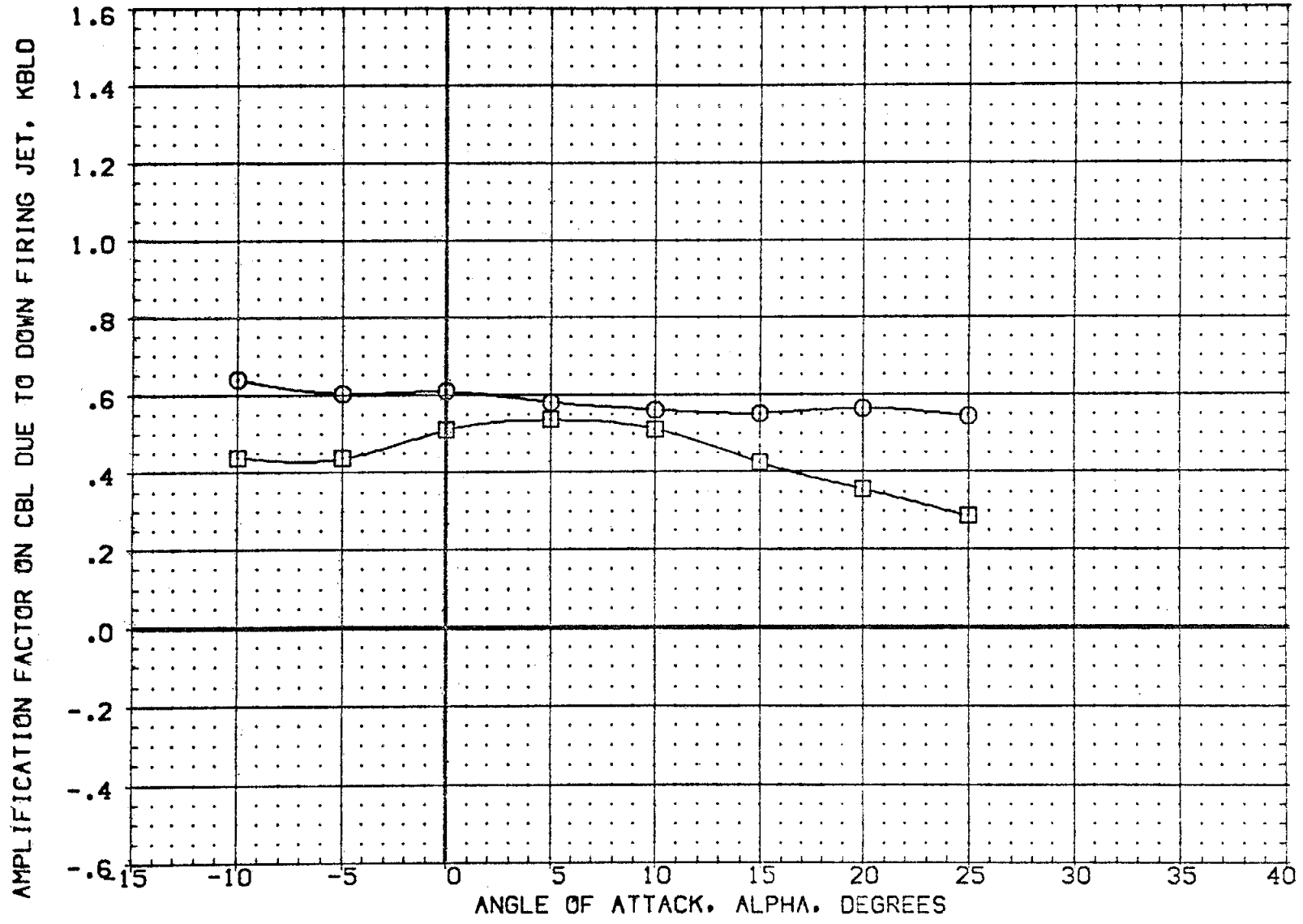


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2028)	○	0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024)	□	0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XØ
YMRP	.0000	IN. YØ
ZMRP	375.0000	IN. ZØ
SCALE	.0100	

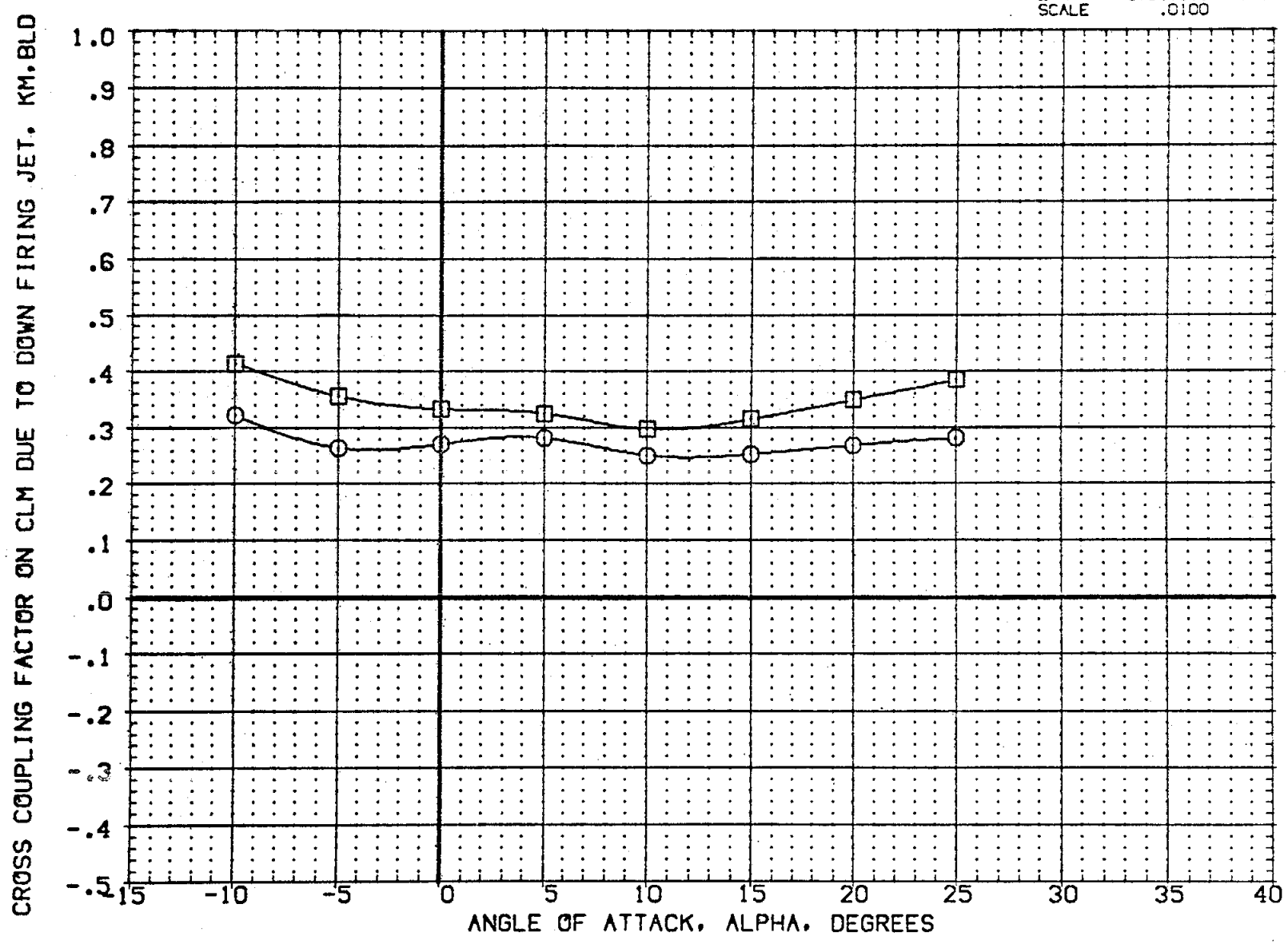


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2028)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

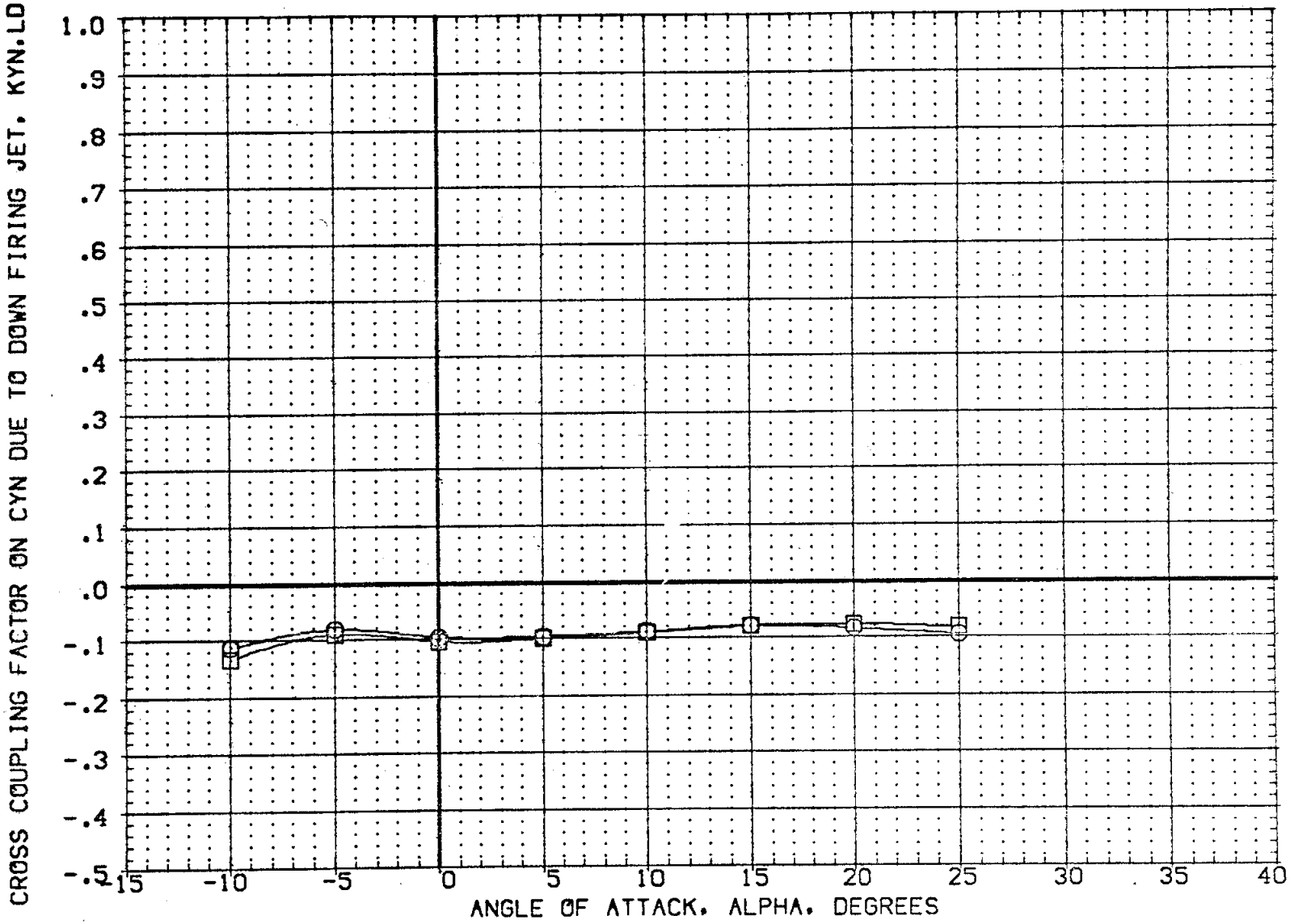


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2028) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024) □	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

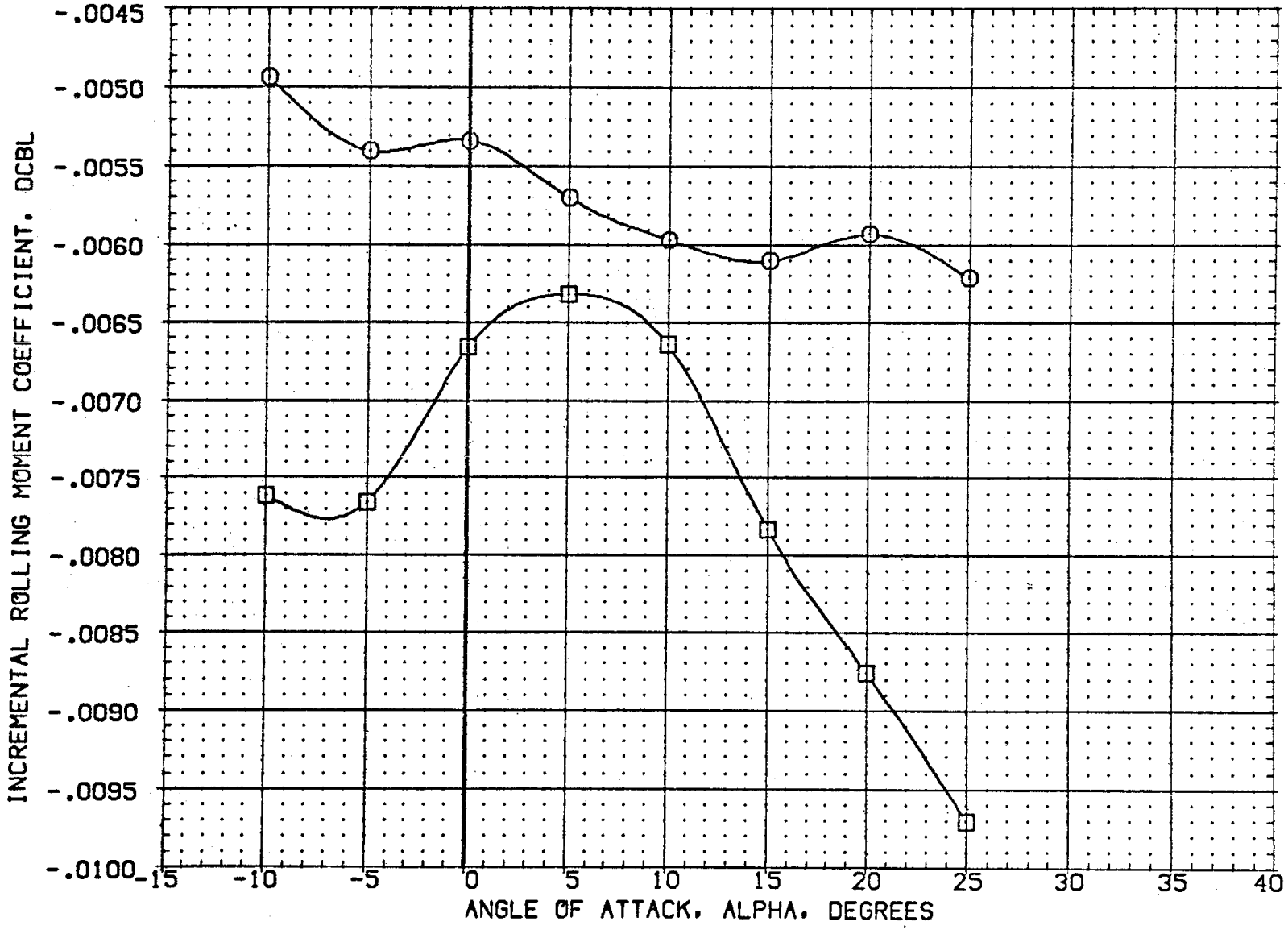


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2028)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

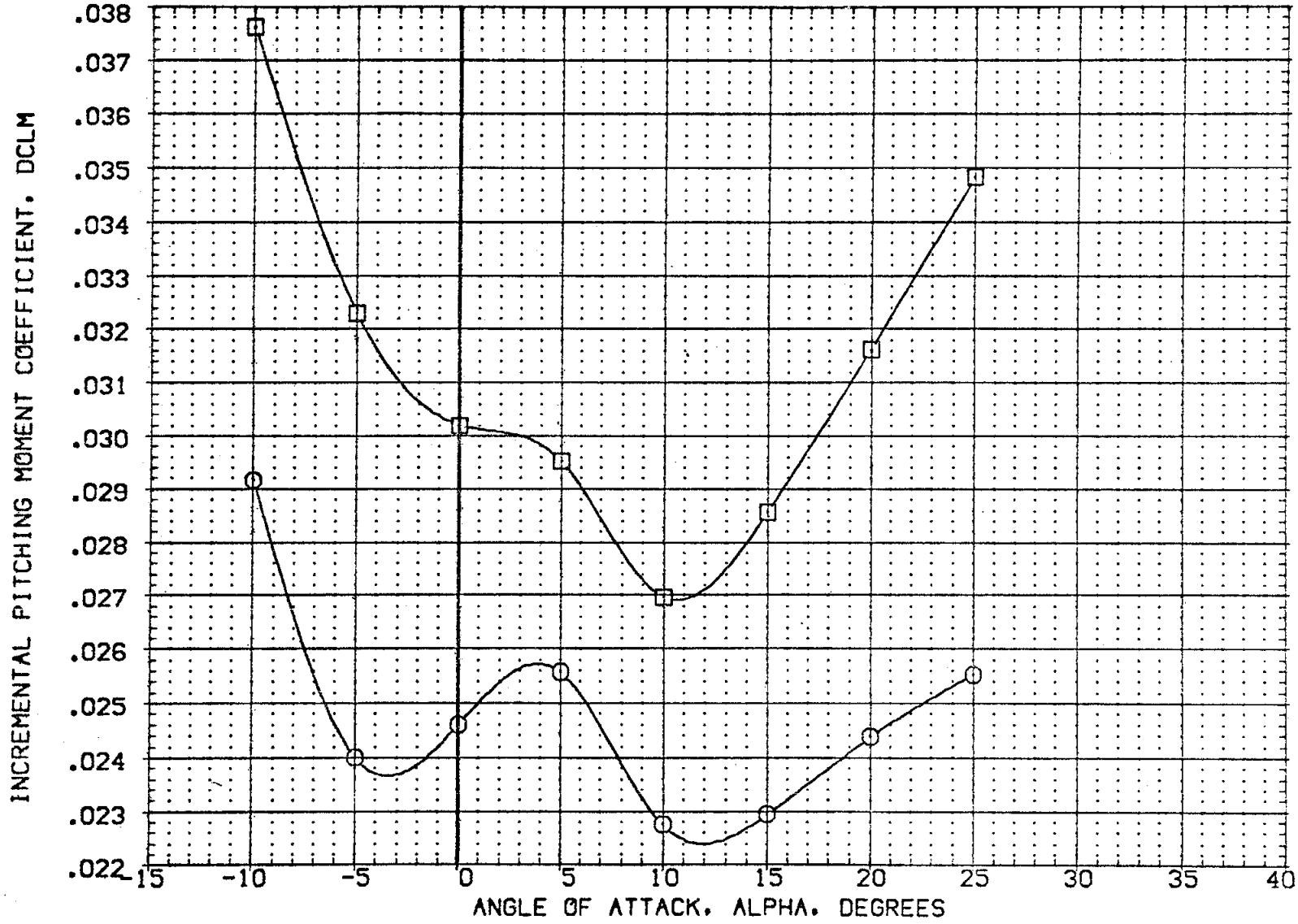


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2028) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(CH2024) □	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

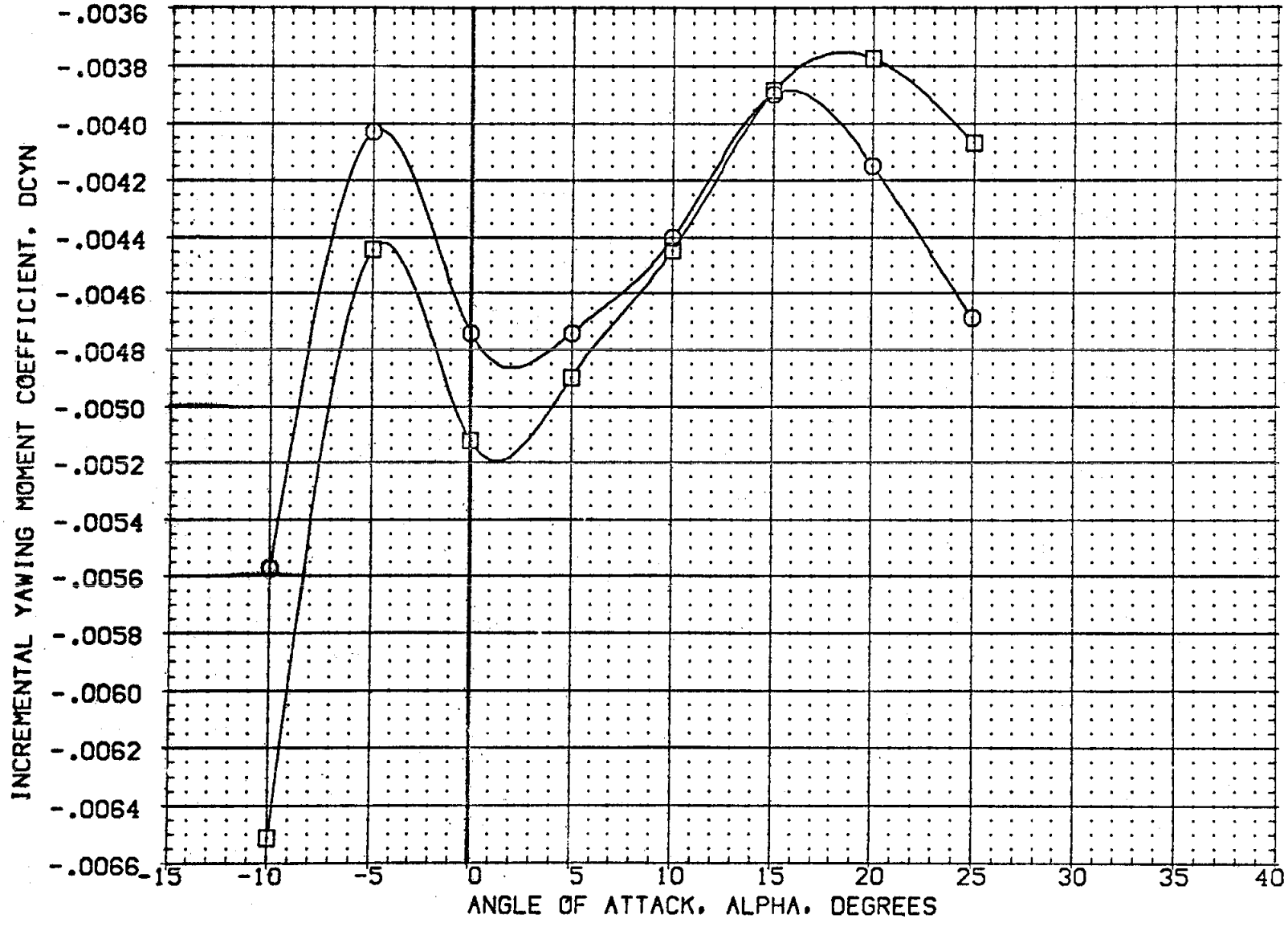


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH228N) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(ZH224N) □	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000
(ZH206F) ◇	0A105 CFHT109 MODEL 32 0(0) NNS2	RCS OFF	-20.000	.000	.000	.000
(ZH203F) △	0A105 CFHT109 MODEL 32 0(0) NNS1	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

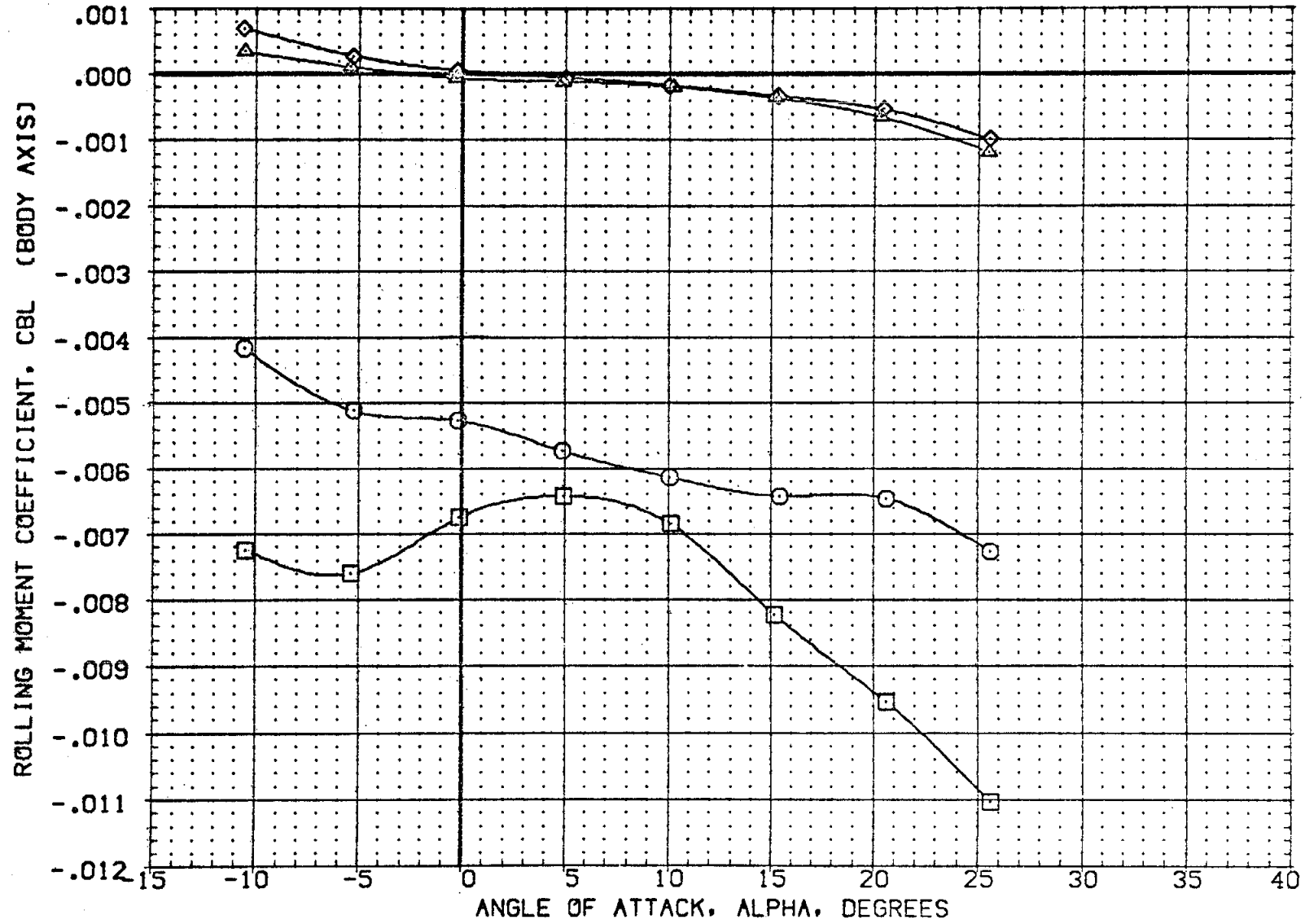


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH228N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(ZH224N)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

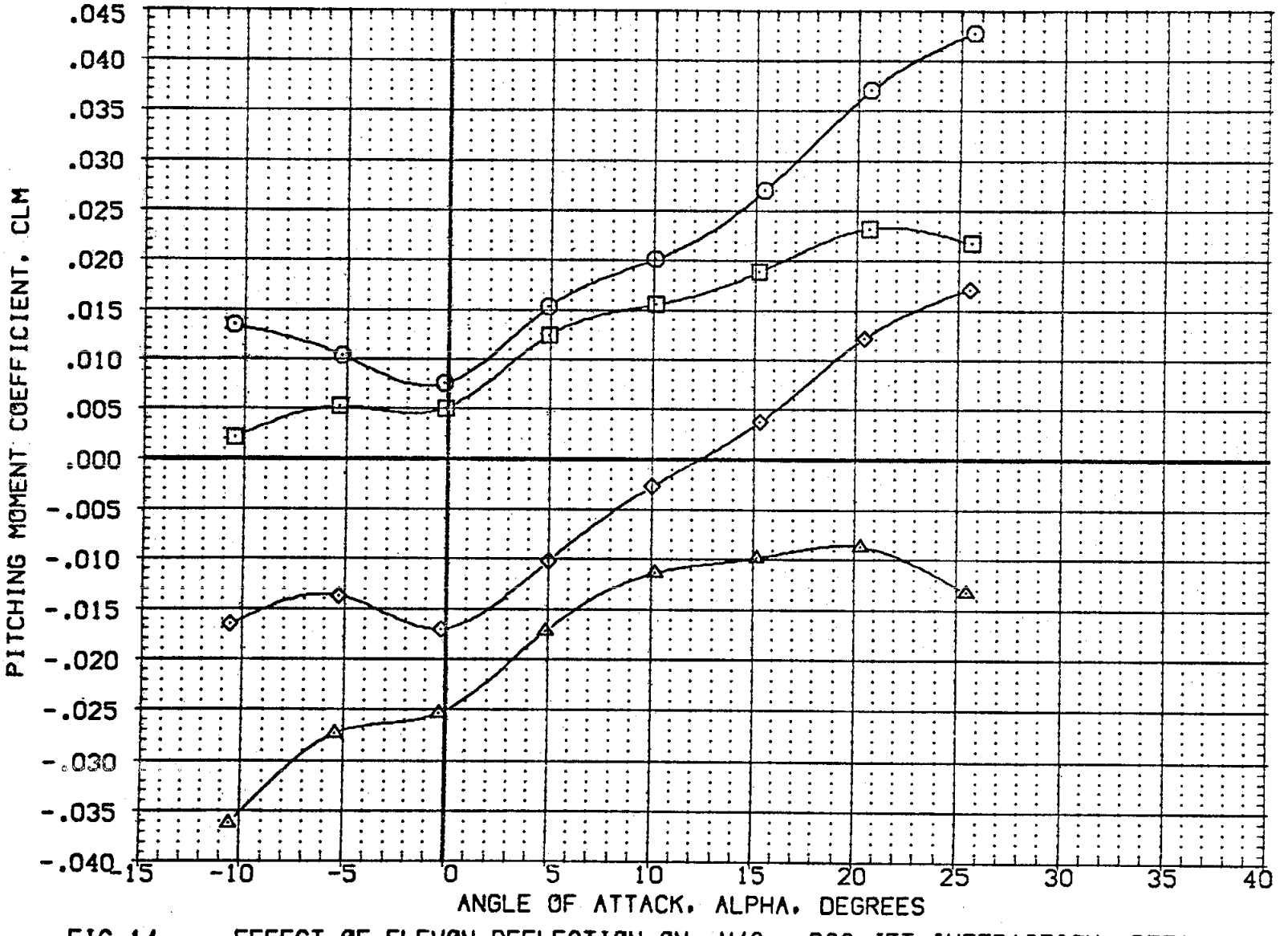


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH228N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-20.000	446.000	7.000	.000
(ZH224N)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	7.000	.000
(ZH206F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-20.000	.000	.000	.000
(ZH203F)	△	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

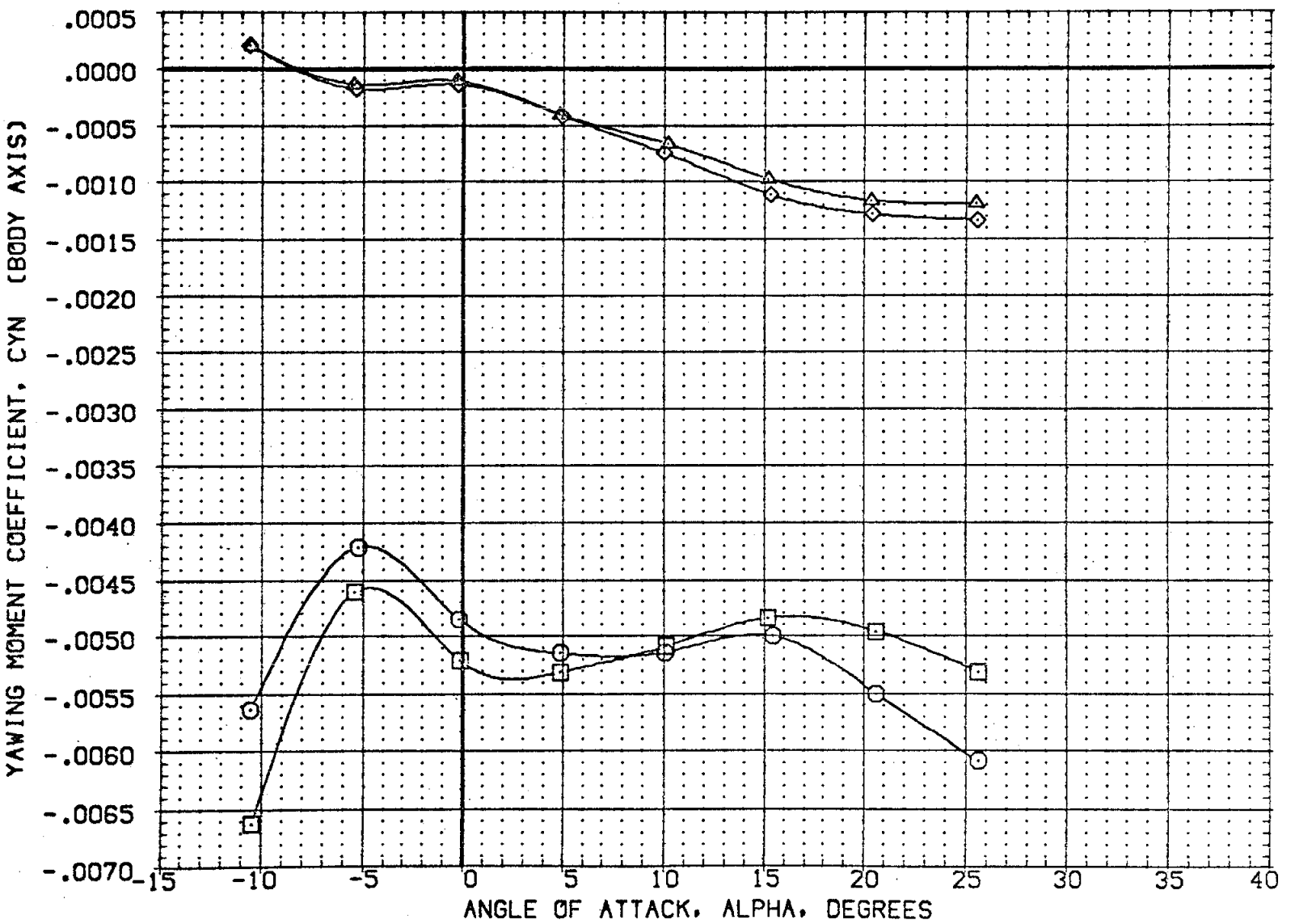


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2025) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

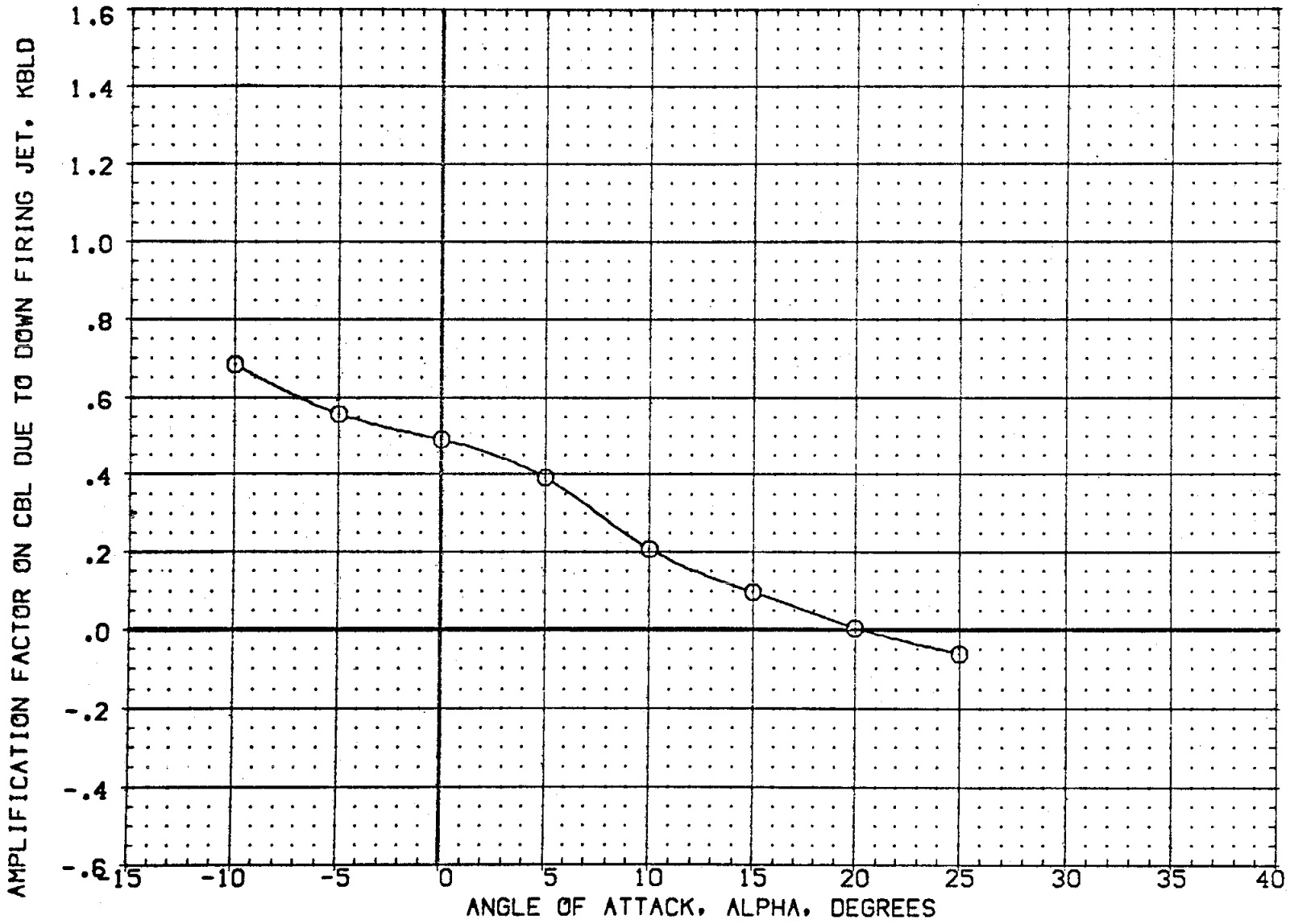


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2025) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

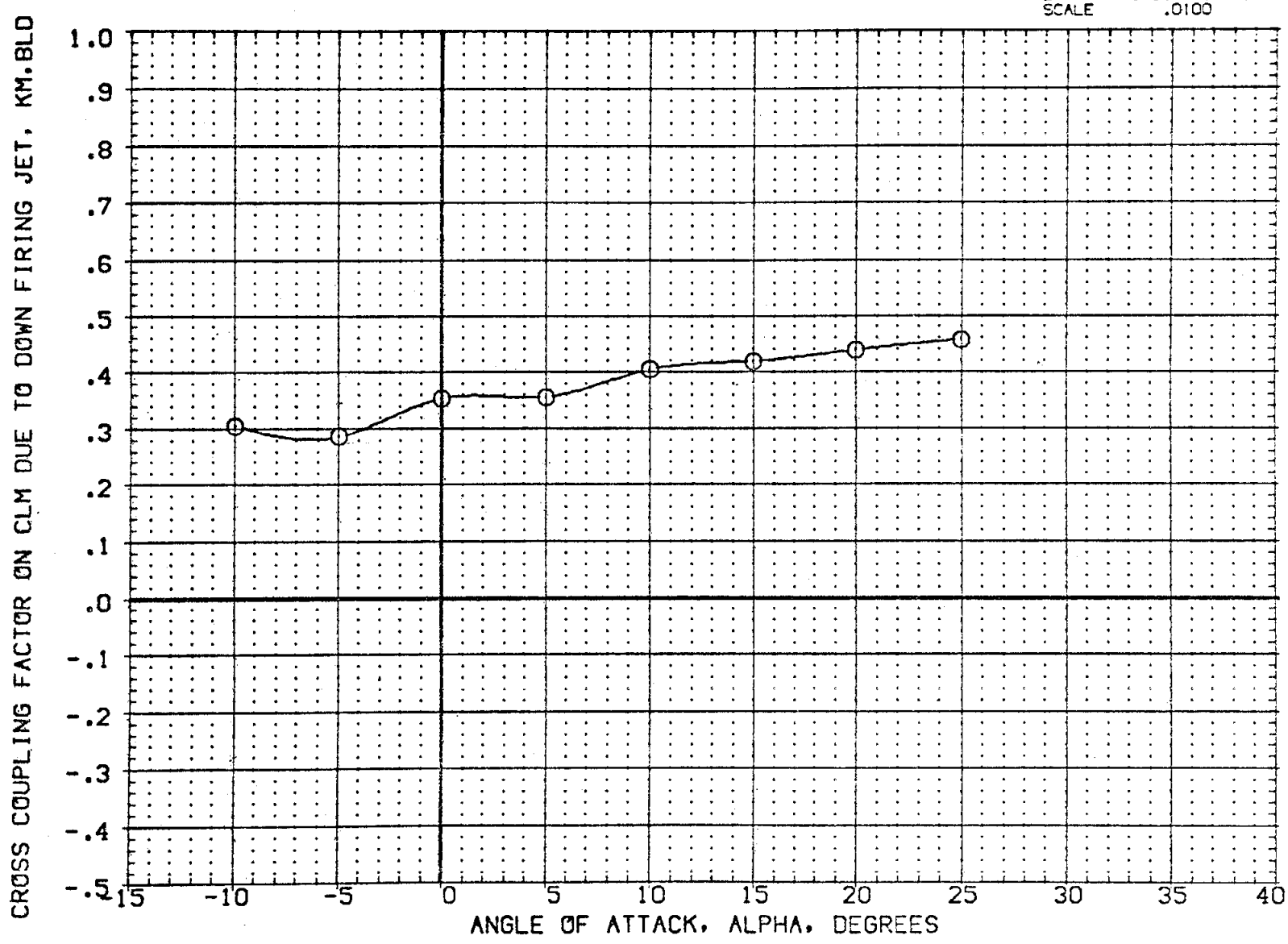


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	C-SIM	BDFLAP
(CH2025) ○	0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

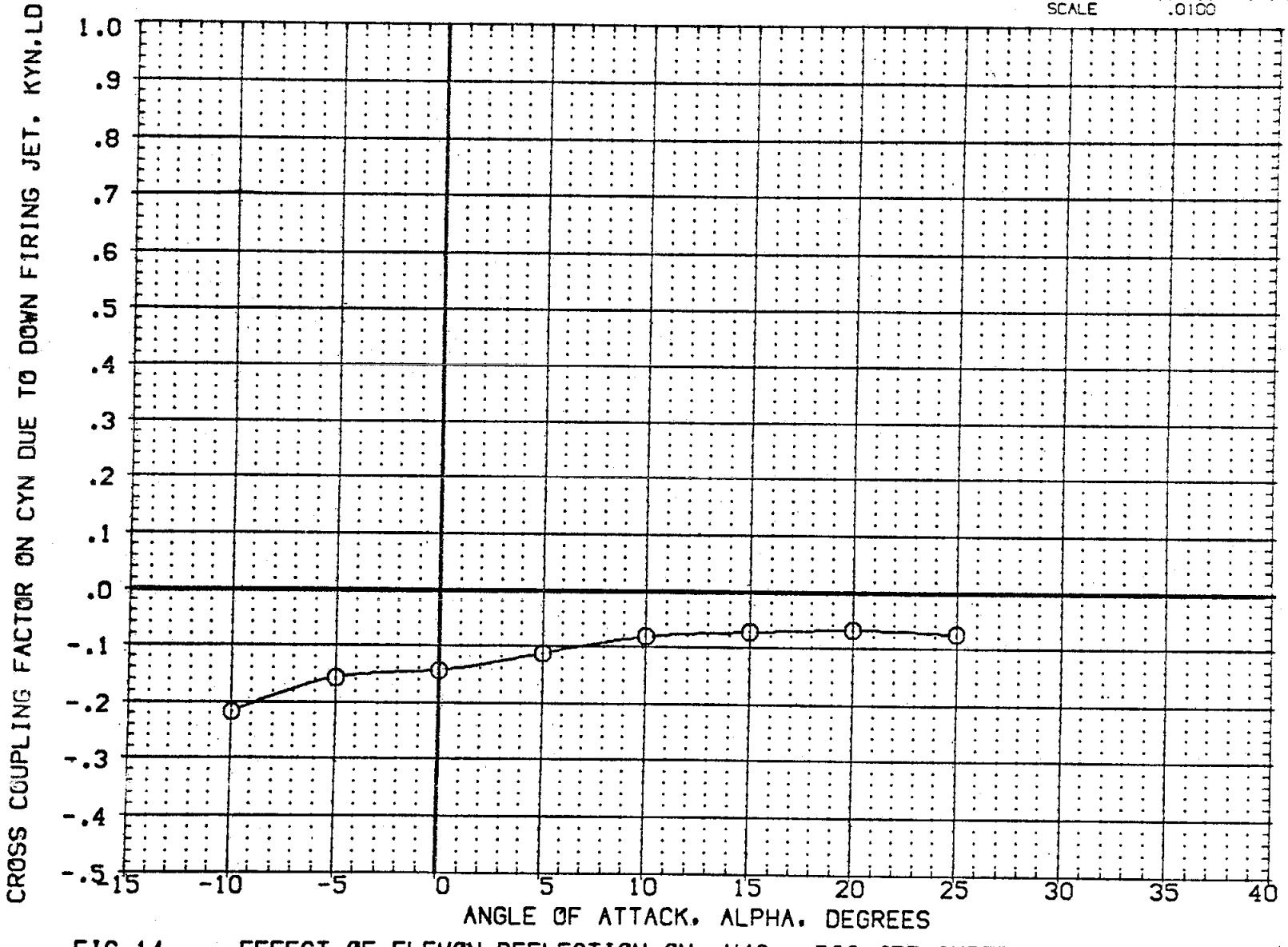


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION. BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2025) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(CH2025) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

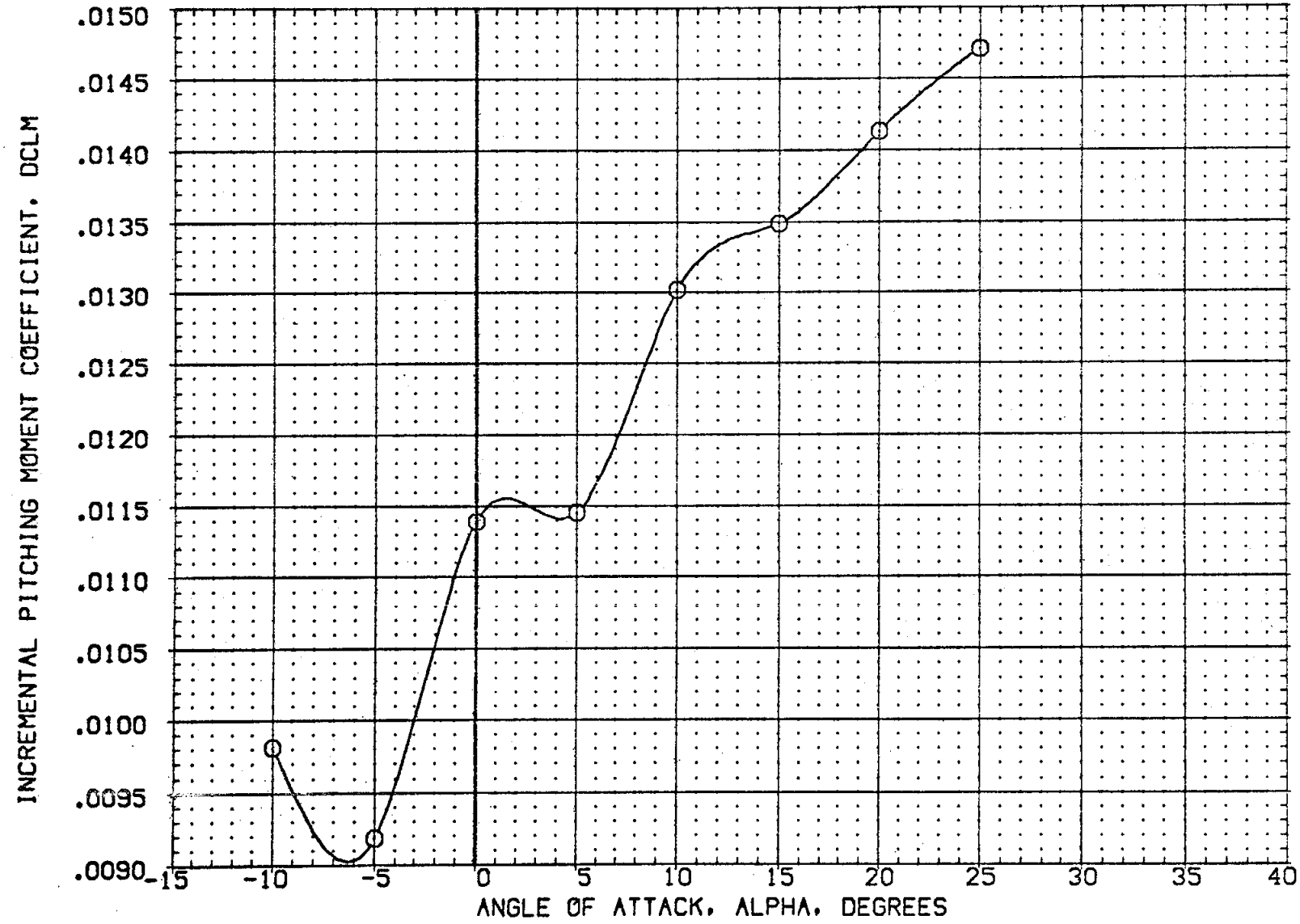


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(CH2025) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

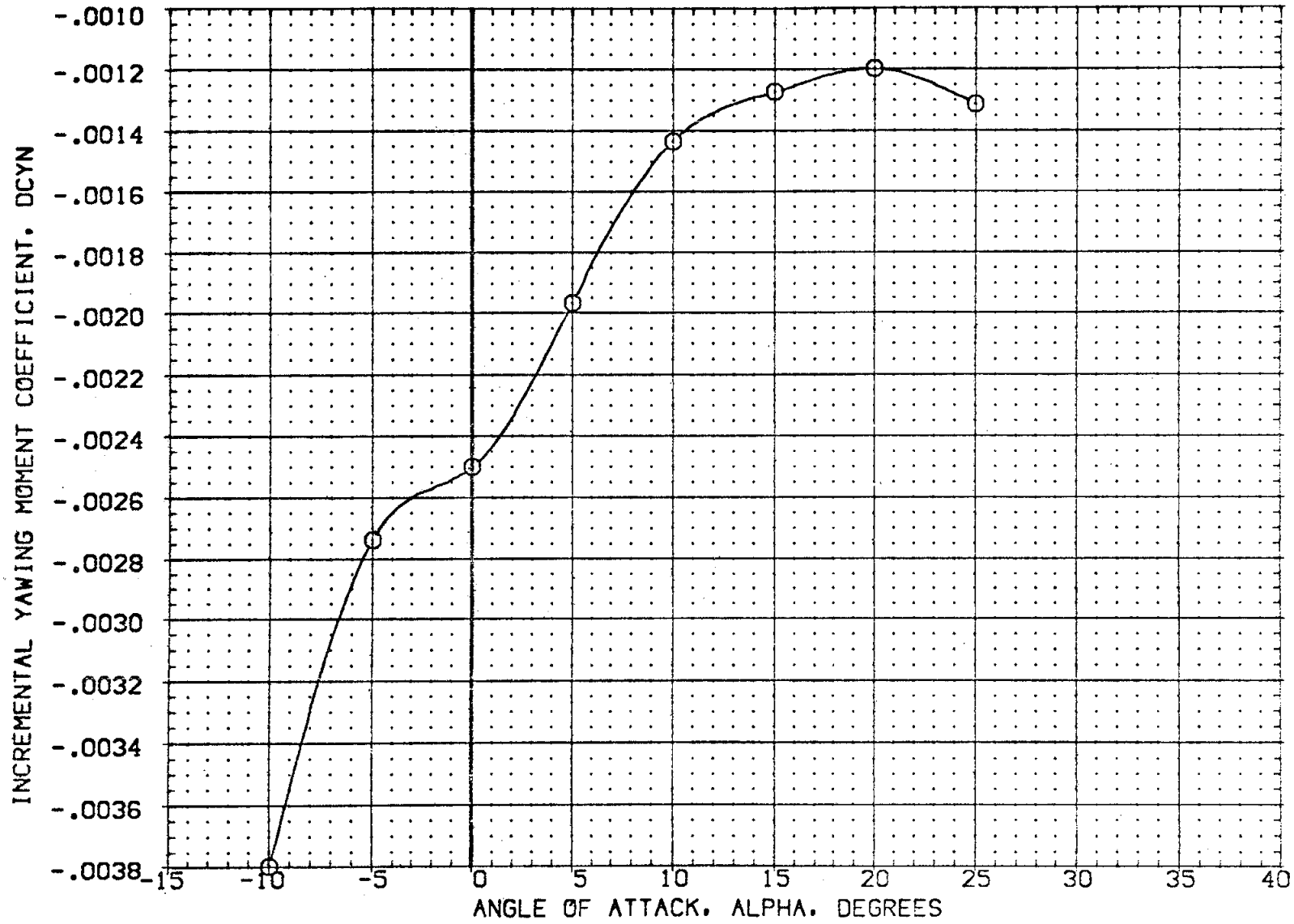


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH22SN)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000
(ZH203F)	□	0A105 CFHT109 MODEL 32 0(0) NNSI	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XG
YMRP	.0000	IN. YG
ZMRP	375.0000	IN. ZG
SCALE	.0100	

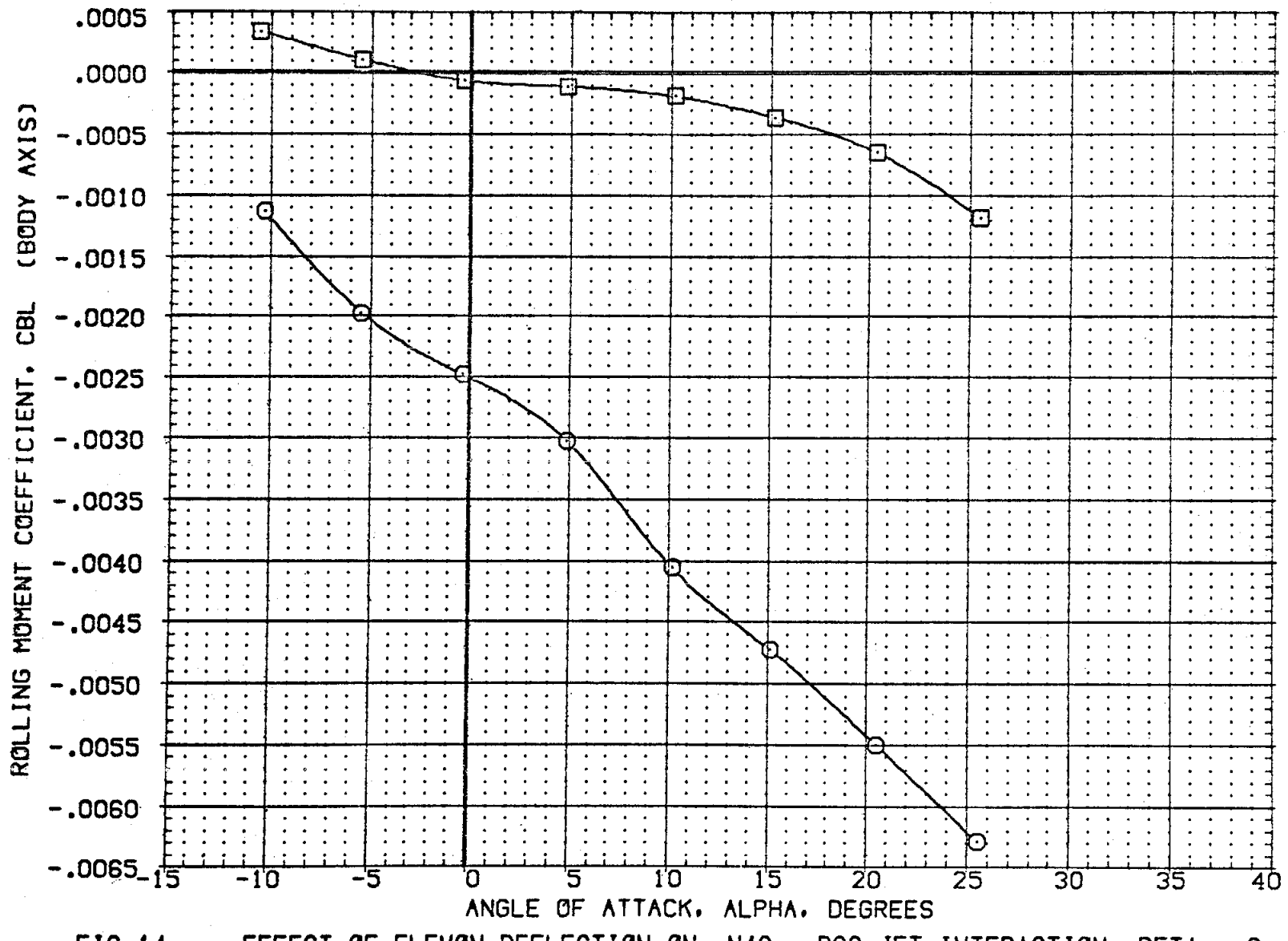


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BDFLAP
(ZH225N)	⊟	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000
(ZH203F)	□	0A105 CFHT109 MODEL 32 0(0) NNSI	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

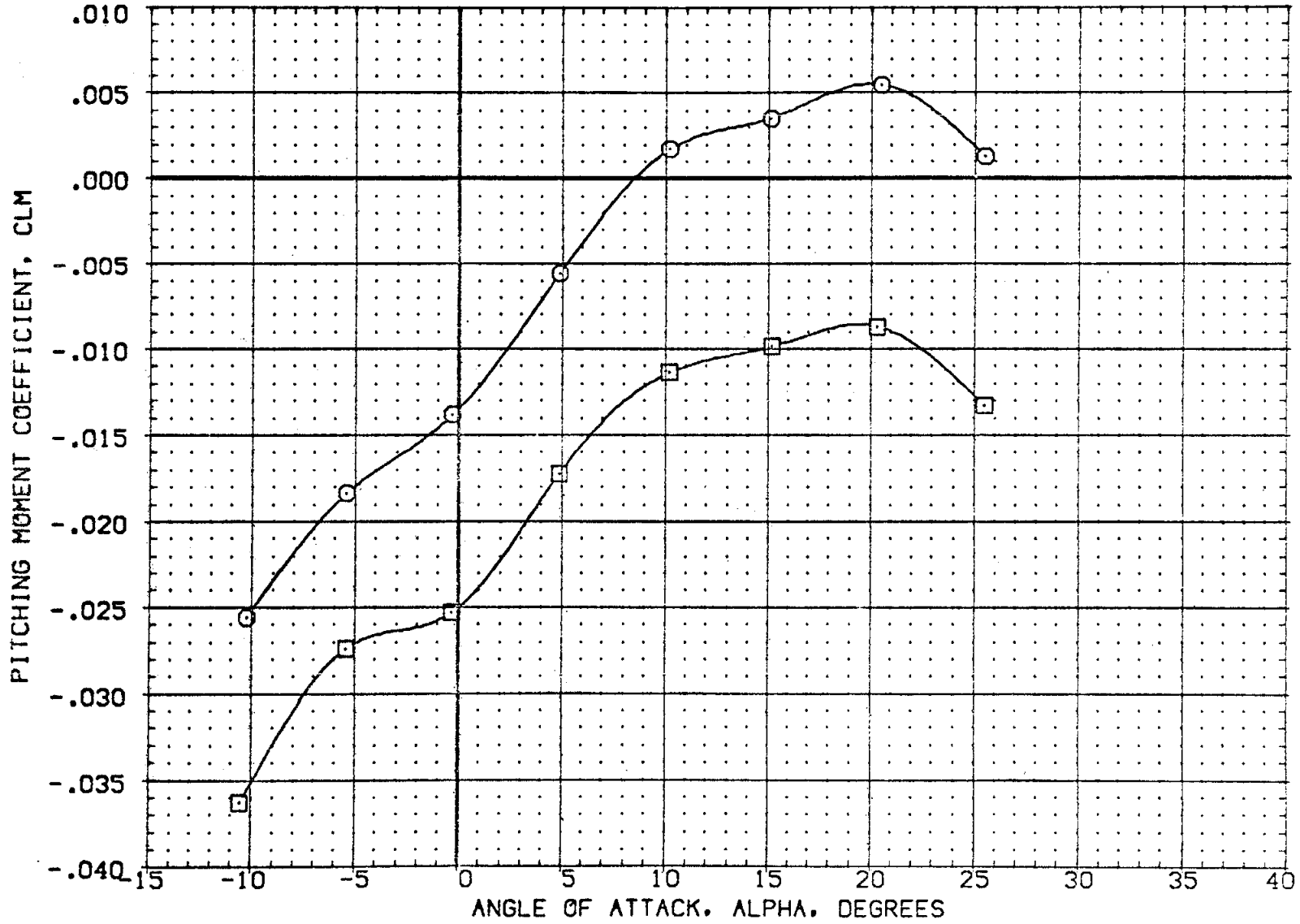


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ELEVON	PCRCS	Q-SIM	BOFLAP
(ZH225N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	20.000	.000
(ZH203F)	□	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

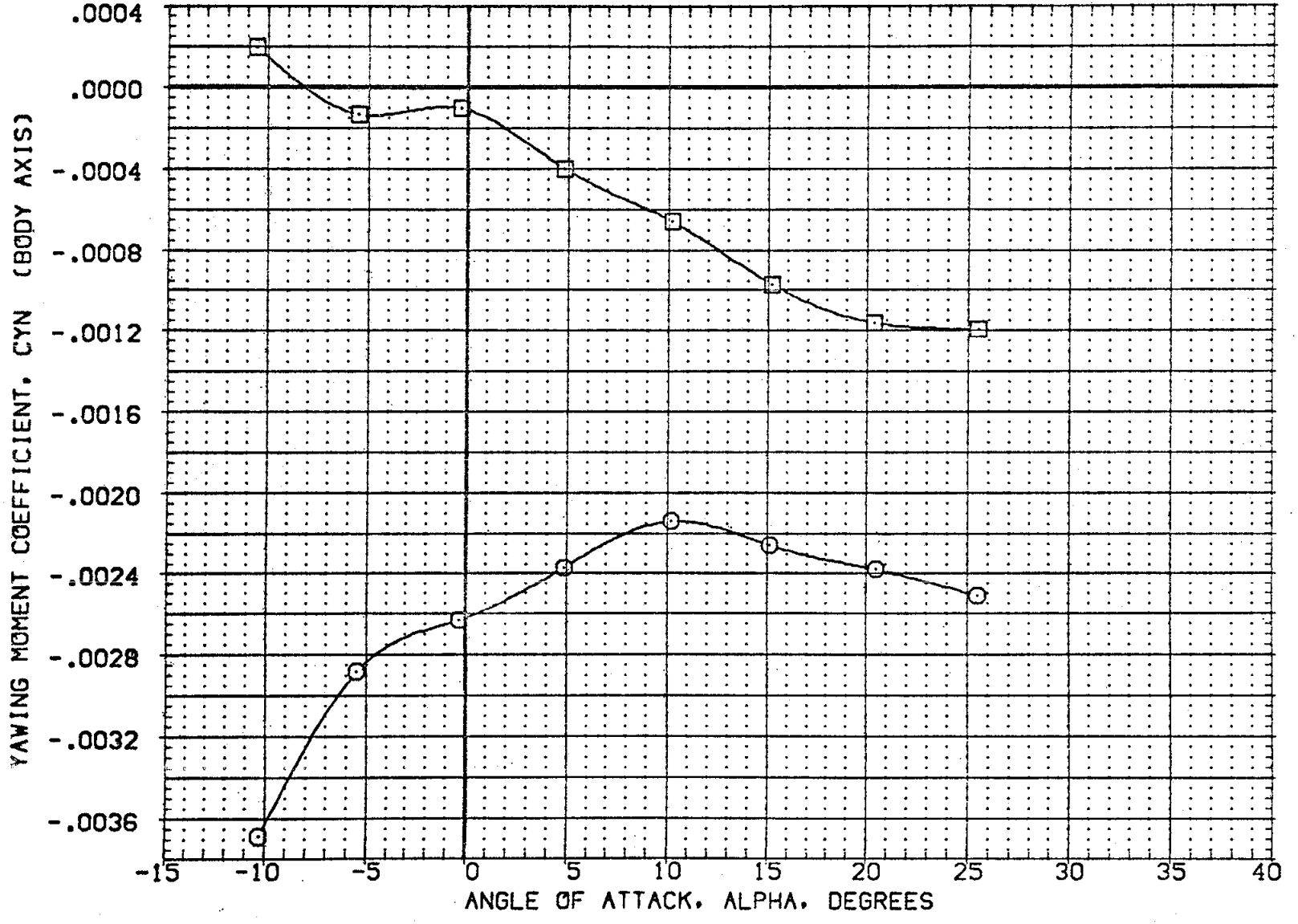


FIG 14 EFFECT OF ELEVON DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

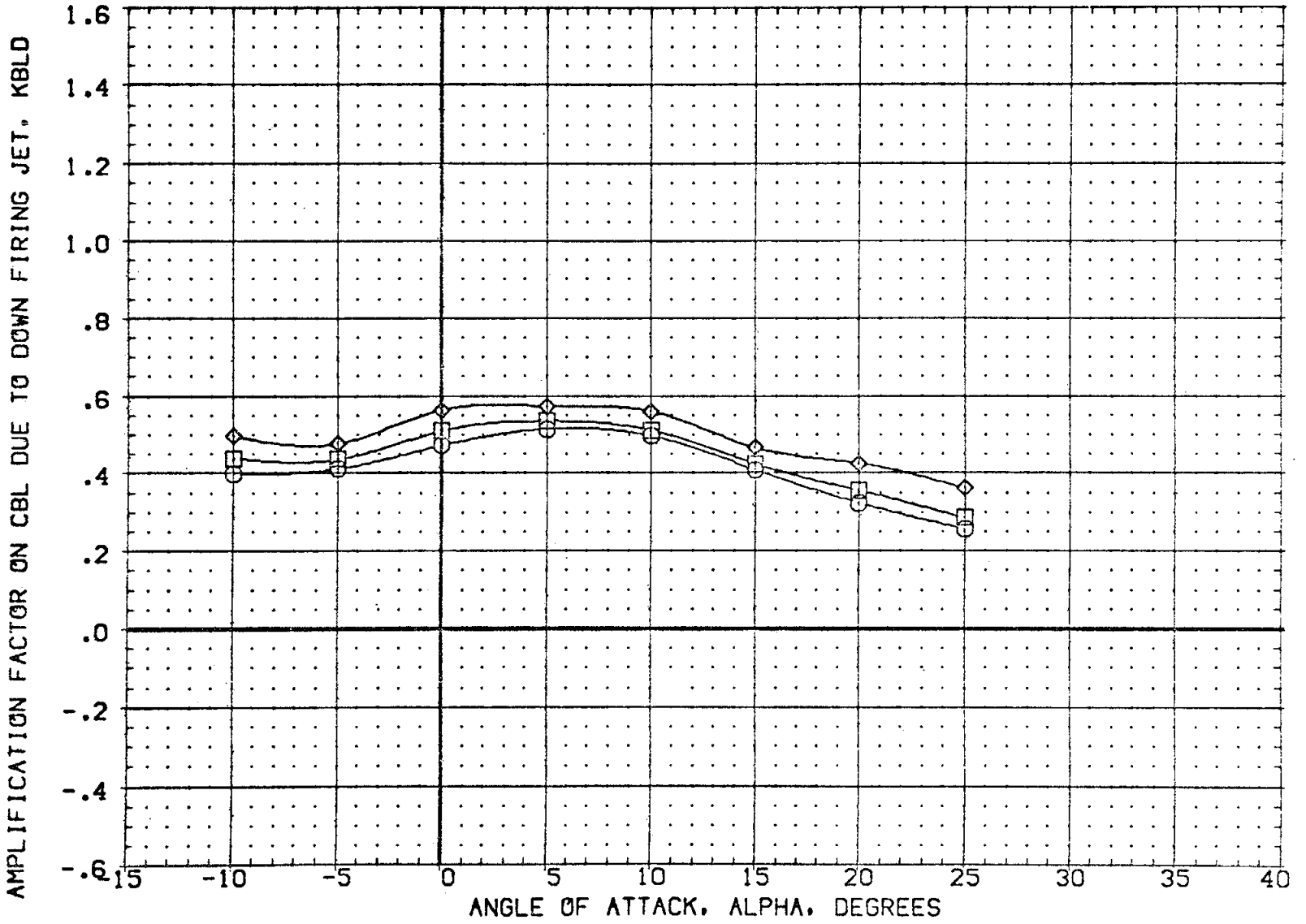


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

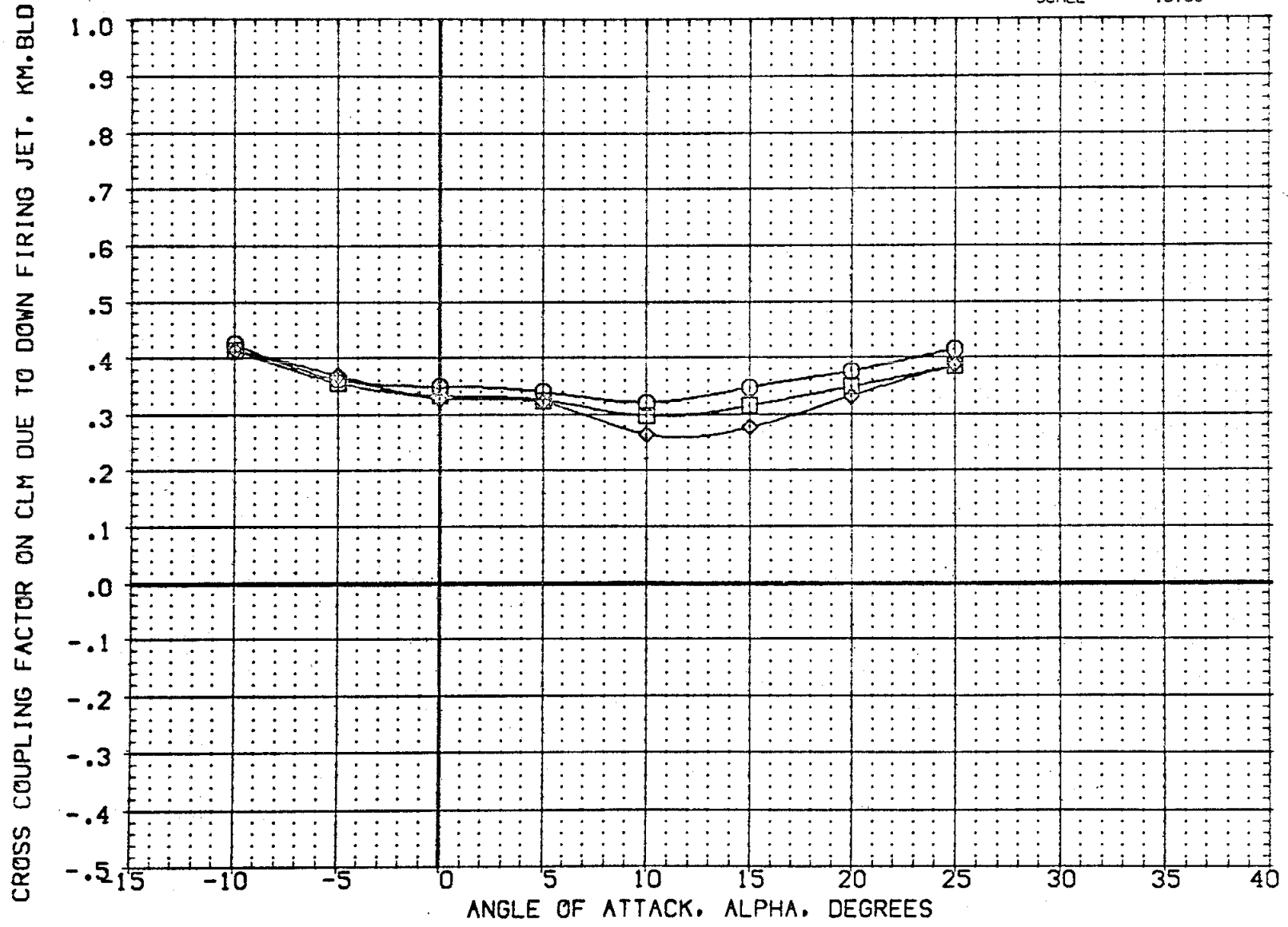


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION. BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

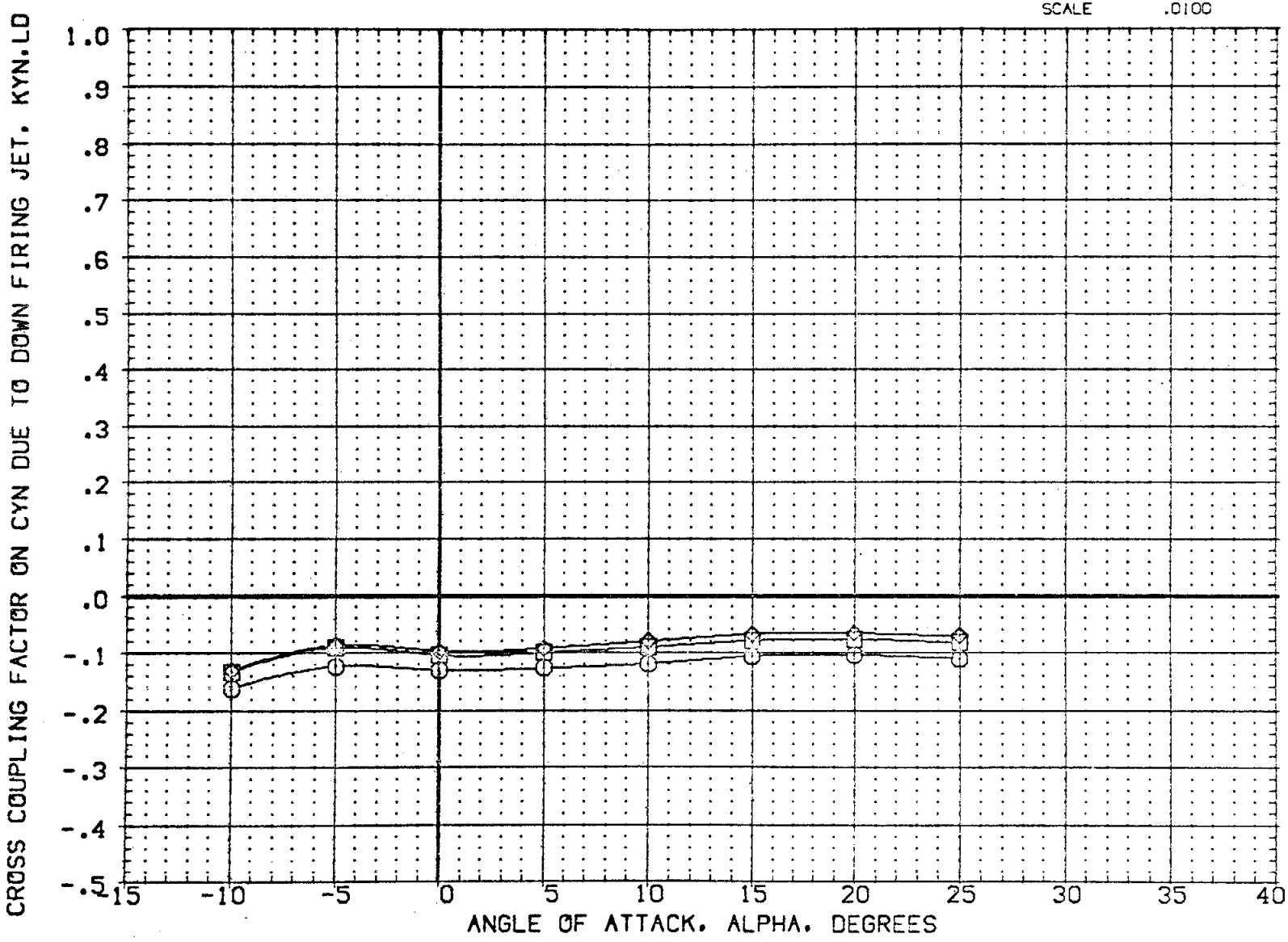


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION. BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

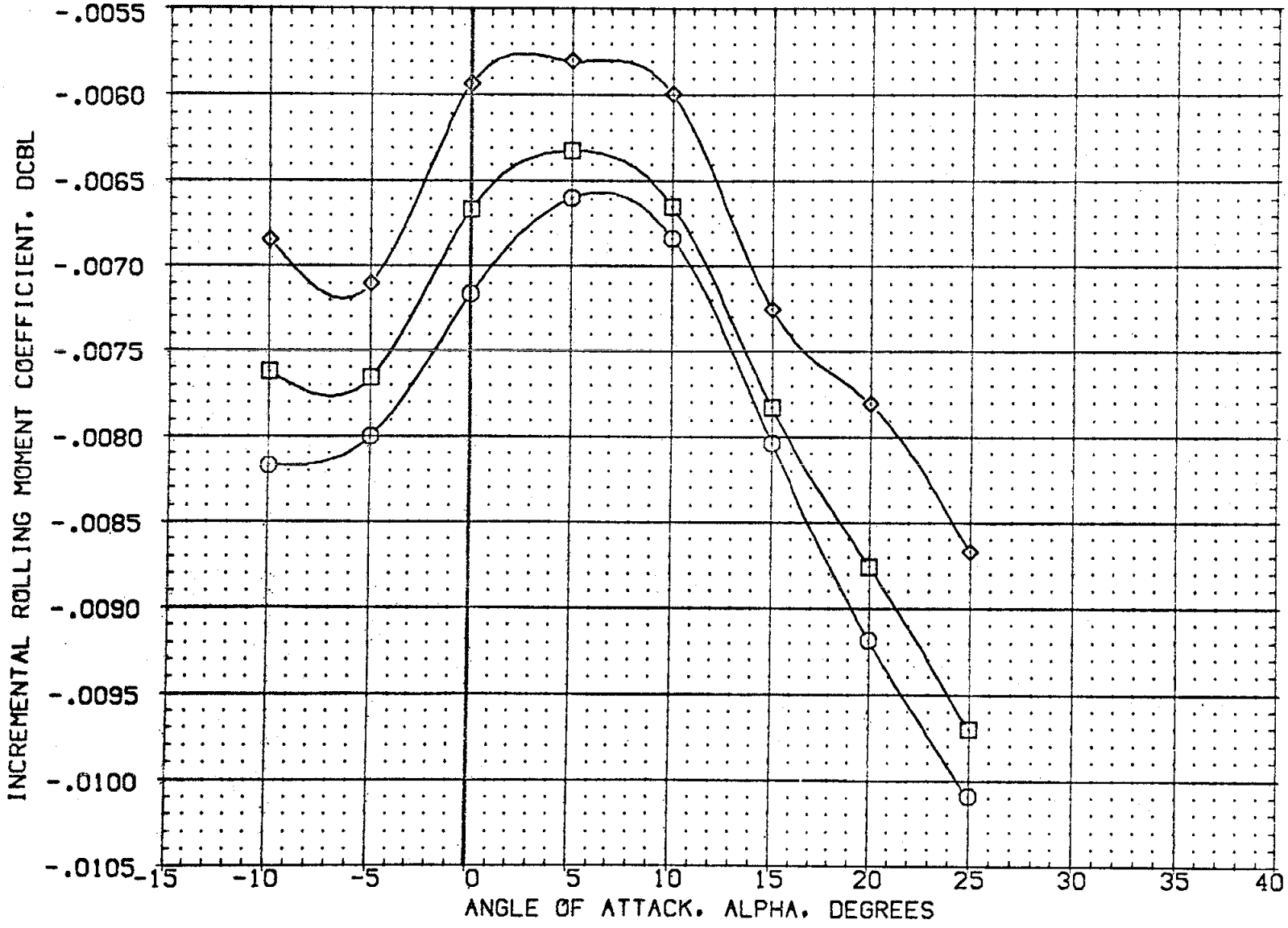


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

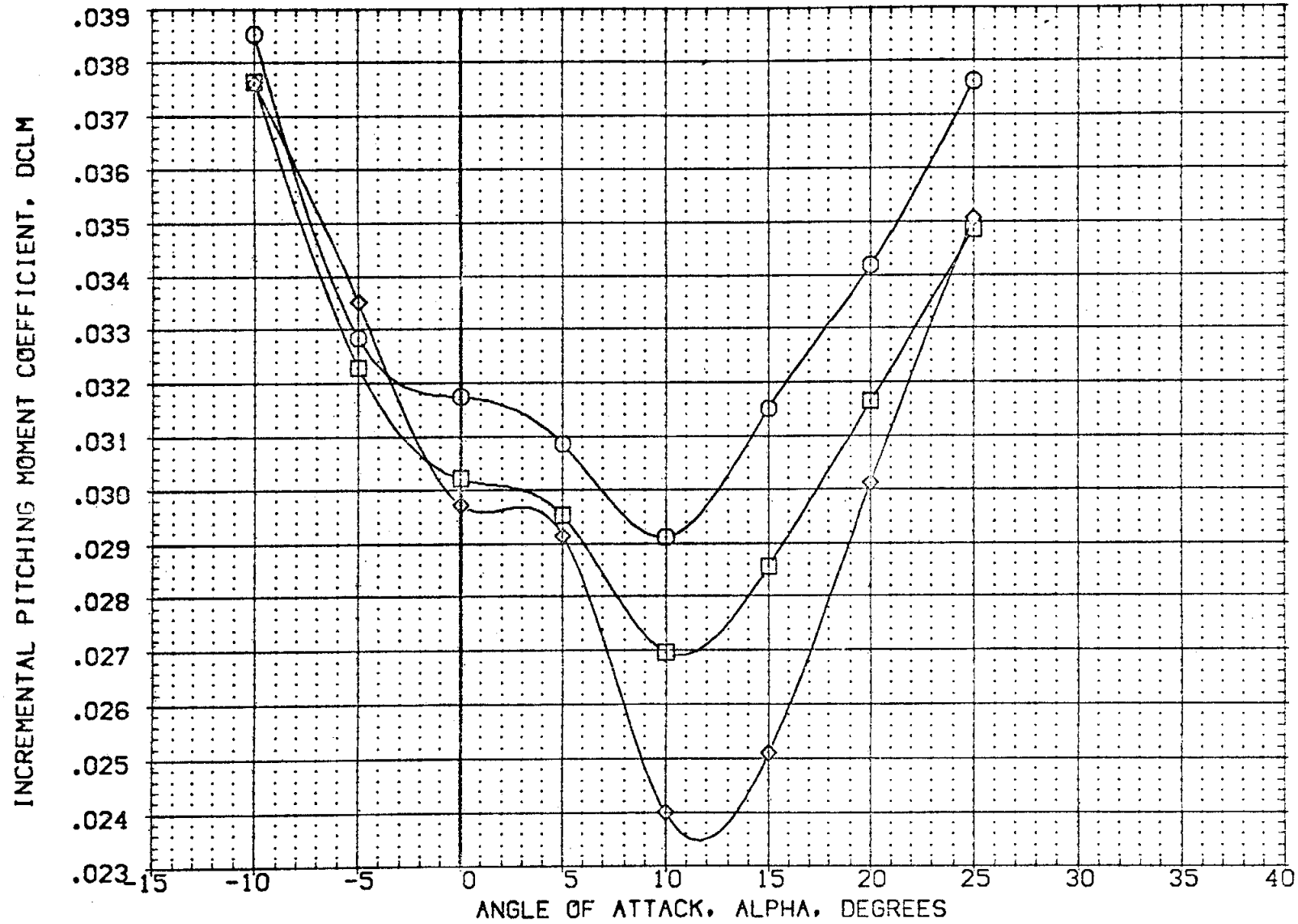


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2016)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(CH2024)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(CH2009)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

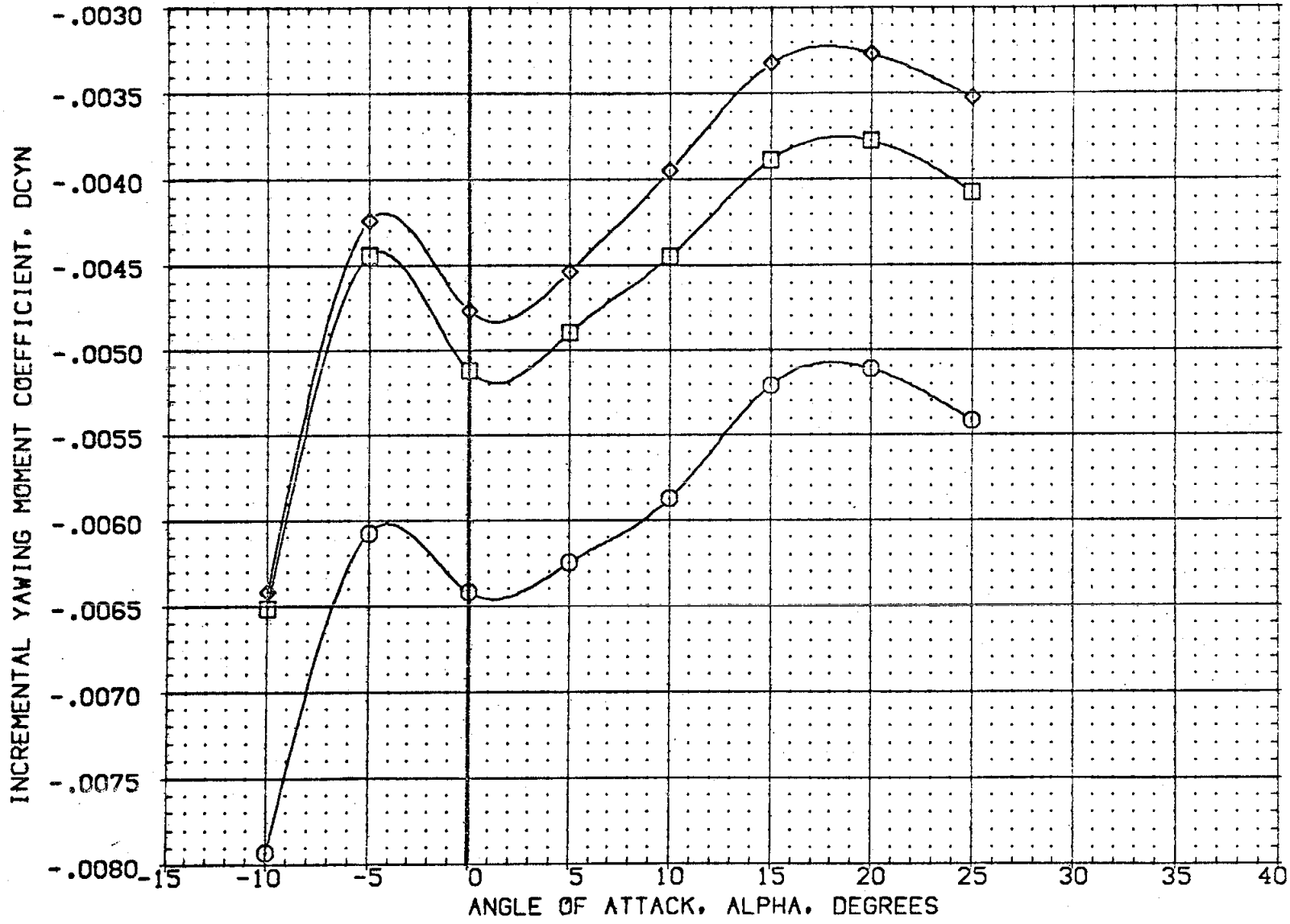


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH216N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(ZH224N)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(ZH209N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▷	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	D	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

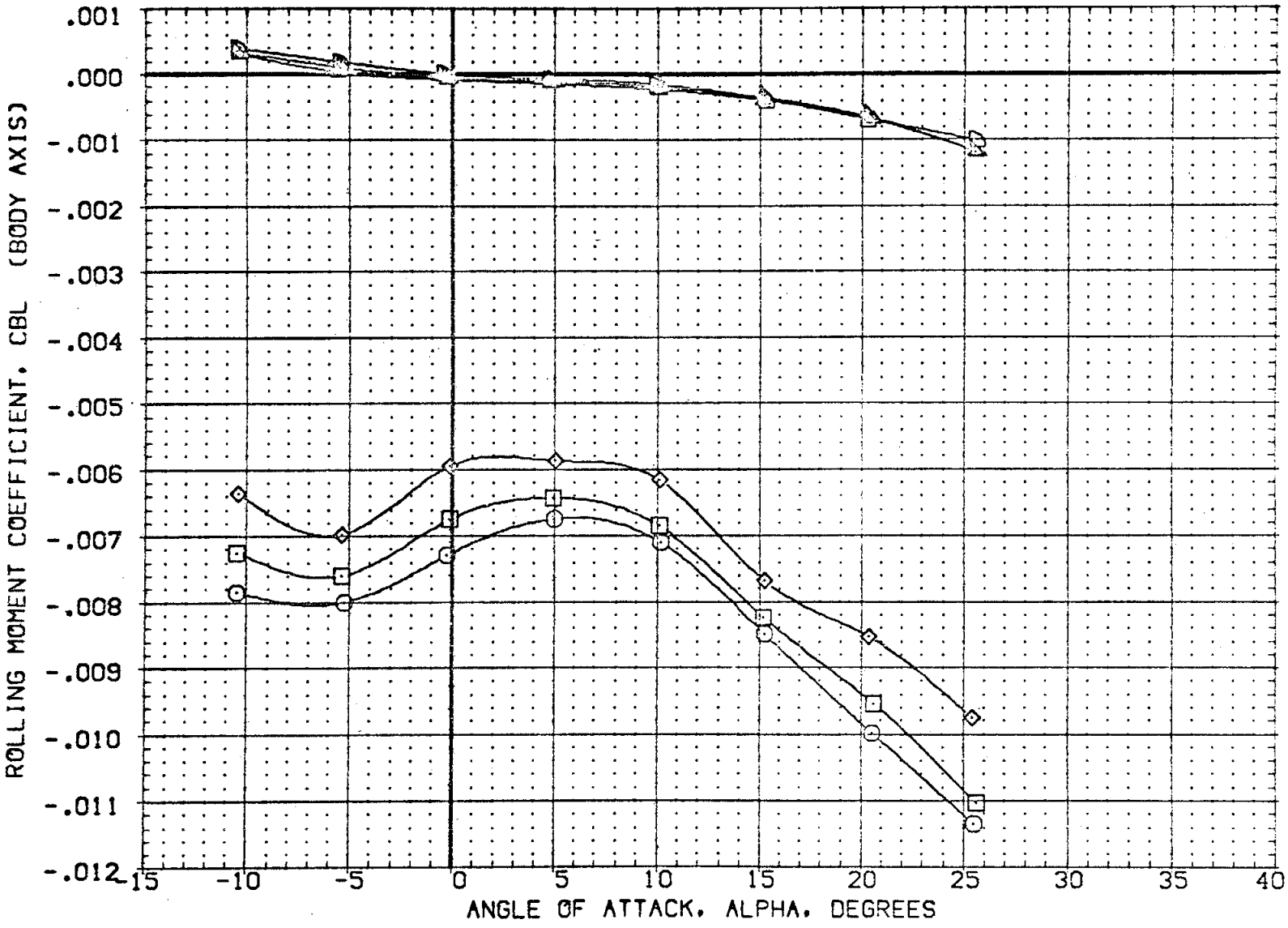


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH216N)	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(ZH224N)	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(ZH209N)	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000
(ZH202F)	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

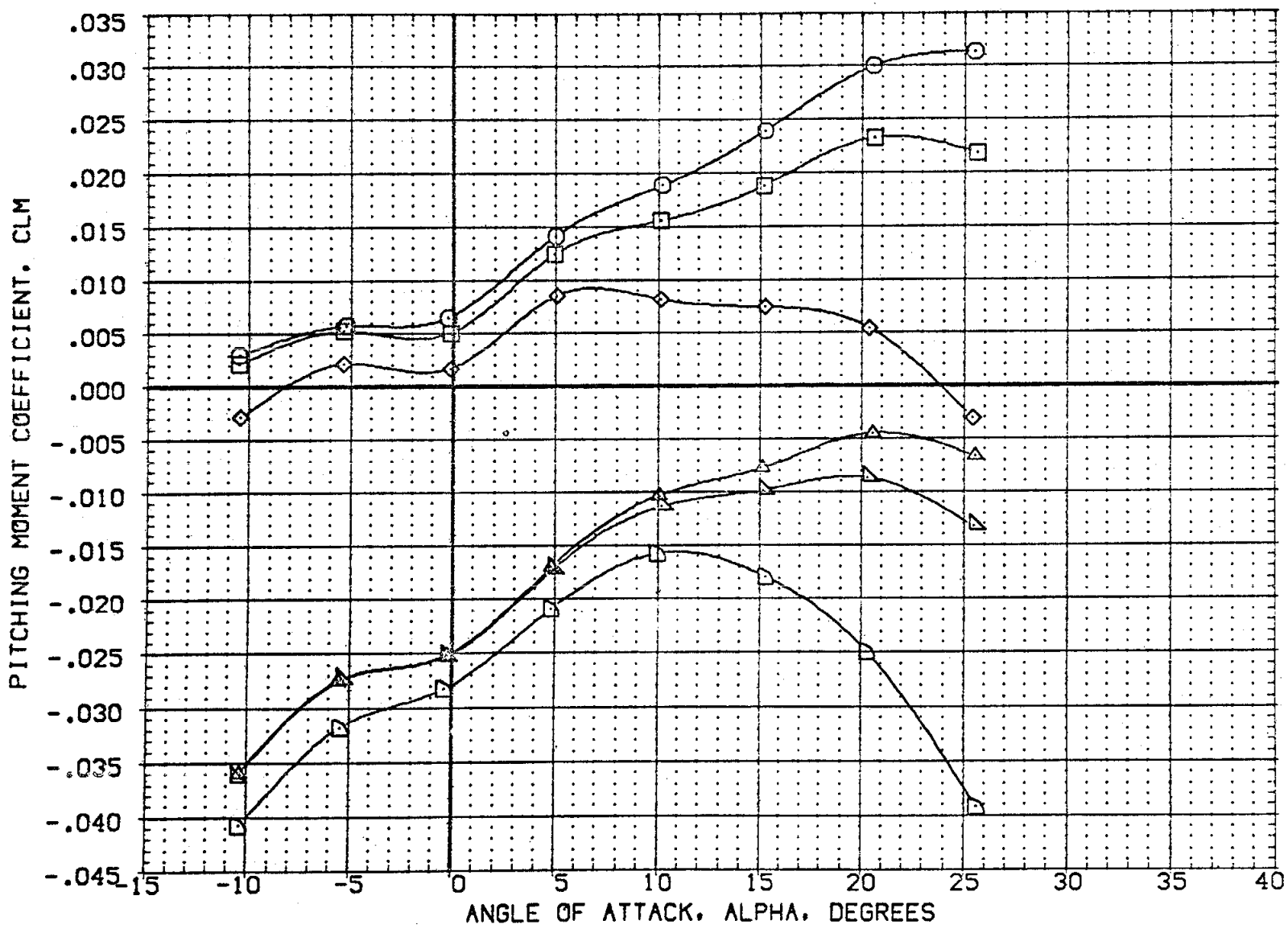


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH216N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	446.000	.000	7.000
(ZH224N)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	446.000	.000	7.000
(ZH209N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	446.000	.000	7.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▷	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

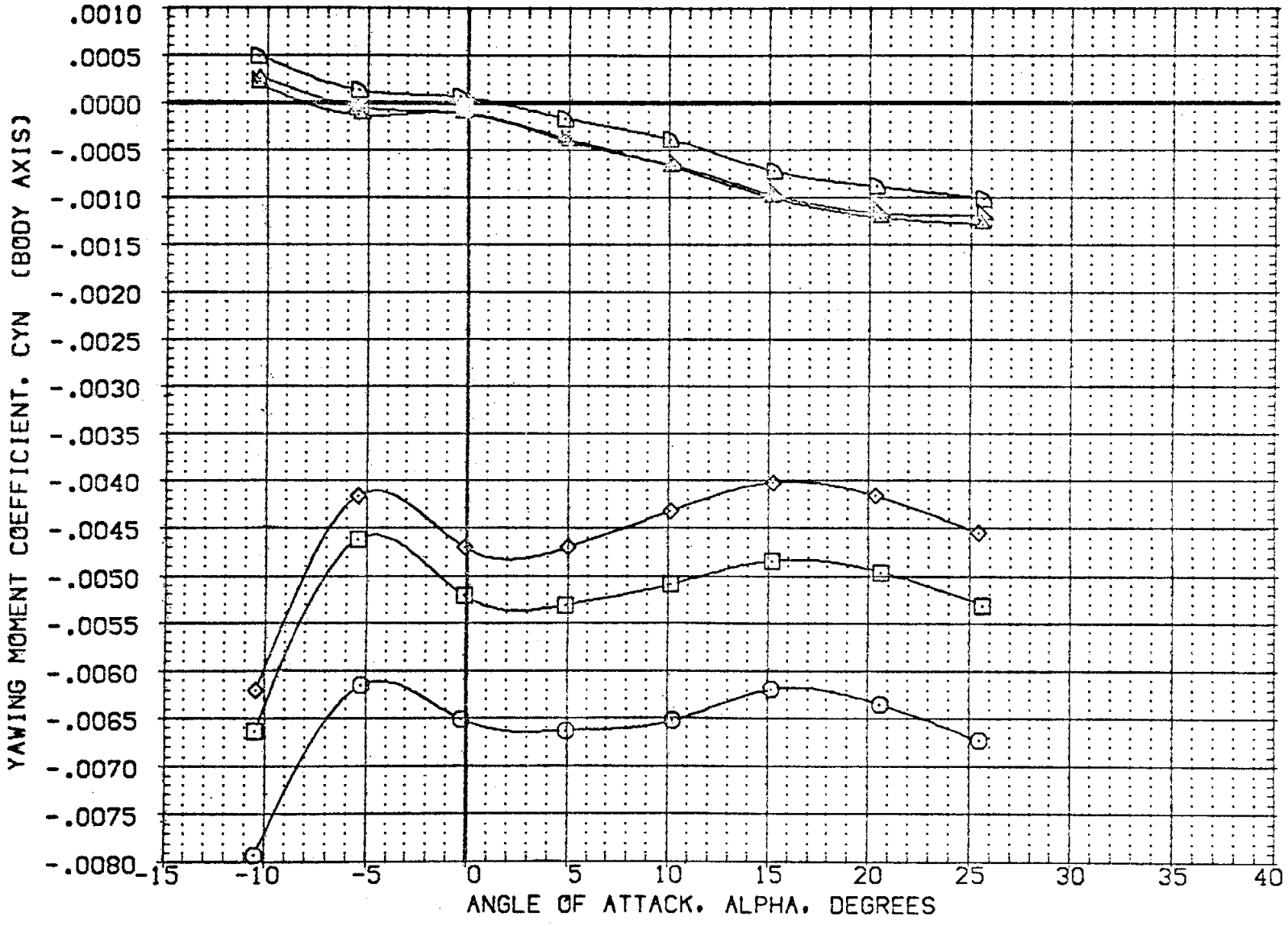


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2015)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2008)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

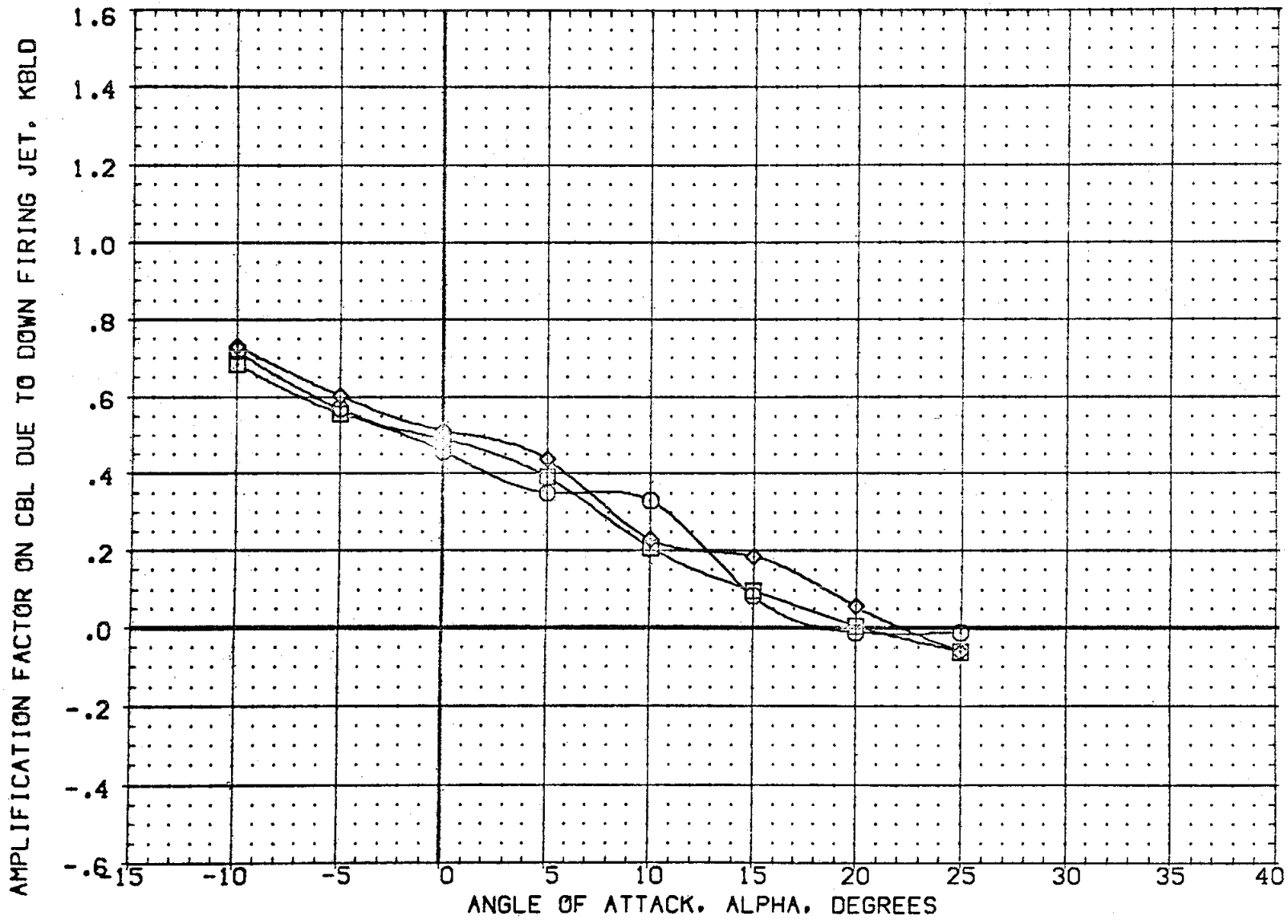


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2015)		0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025)		0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2068)		0A10S CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

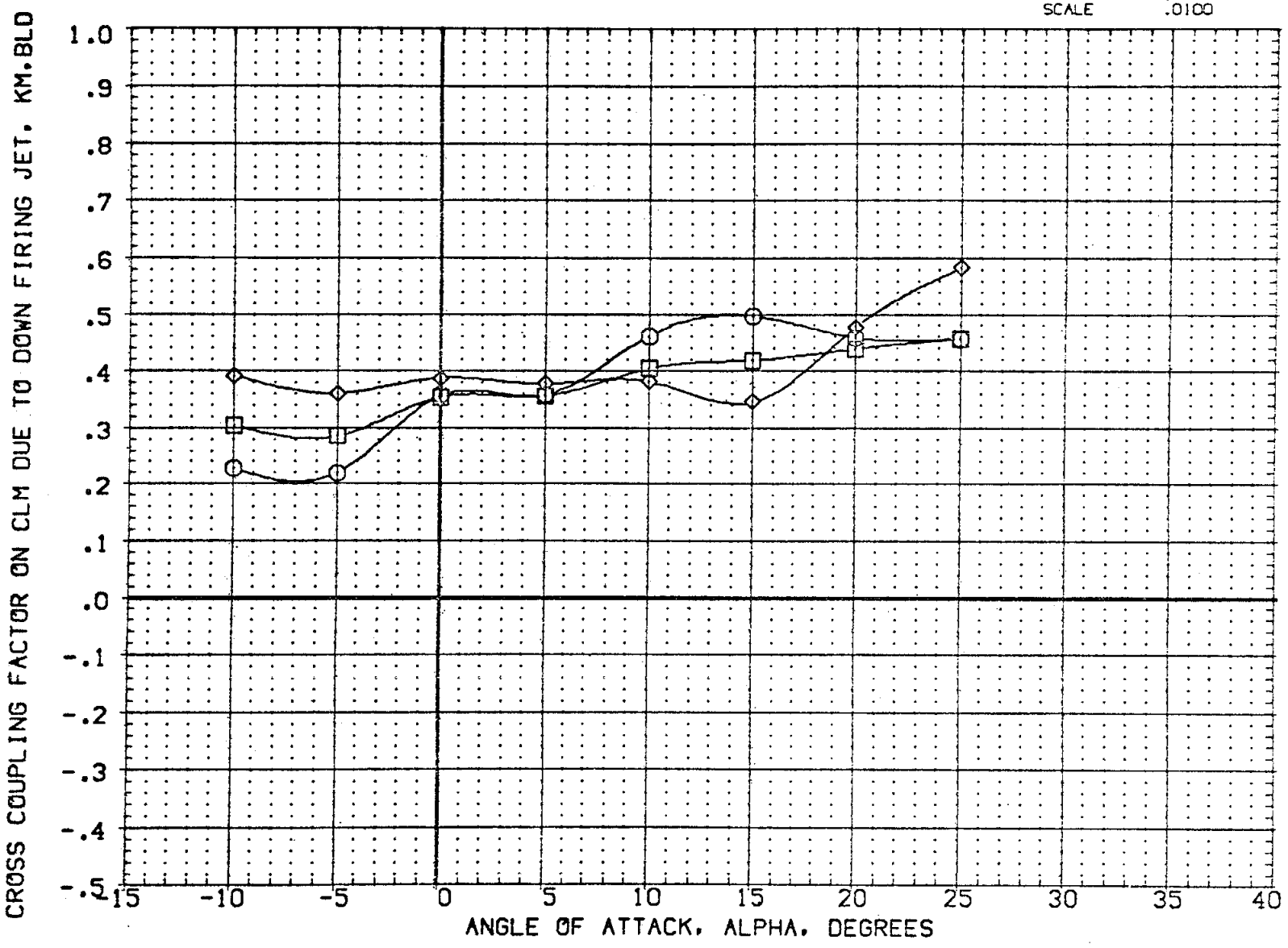


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2015)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2008)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

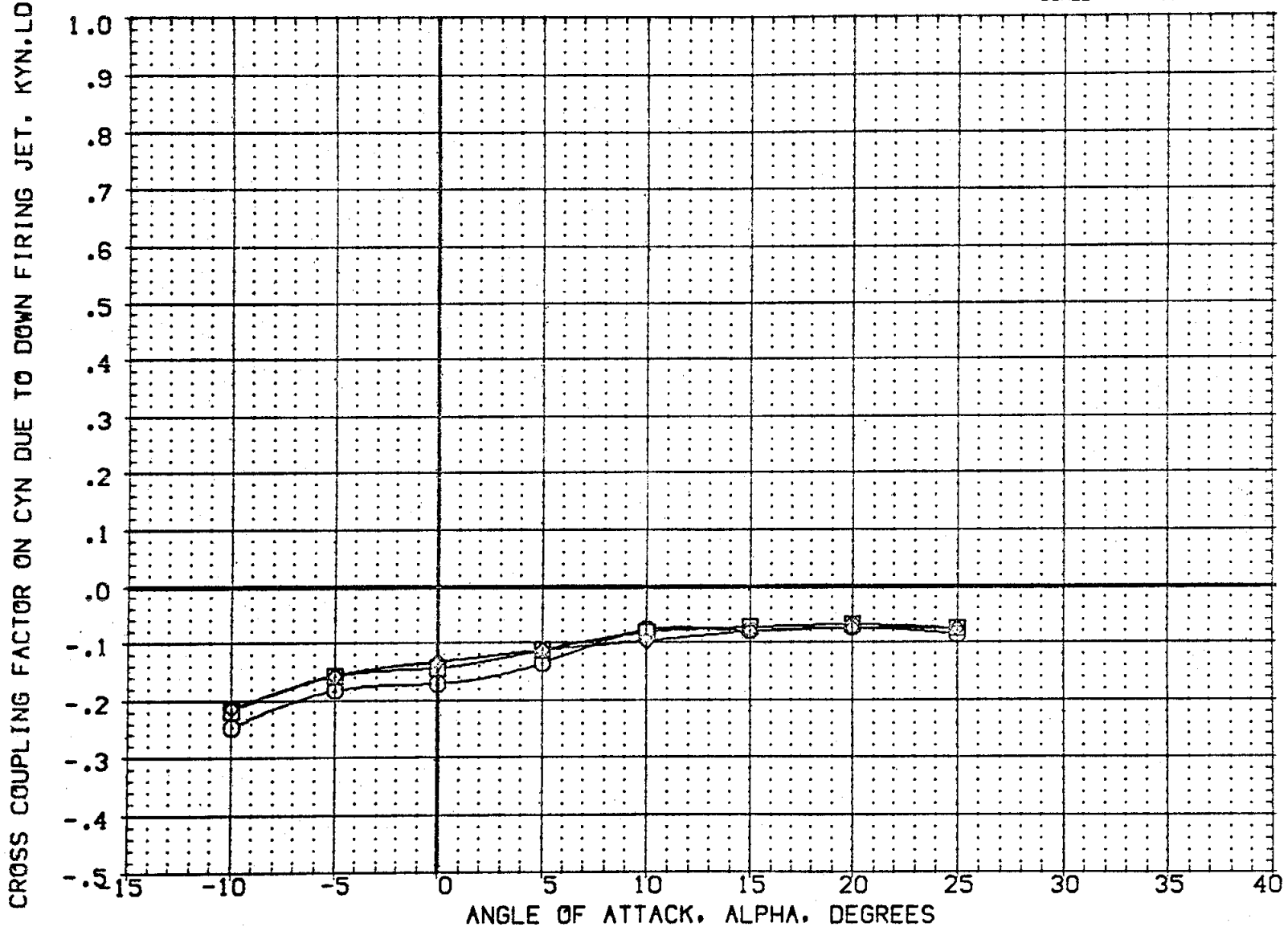


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2015) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025) □	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2008) ◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

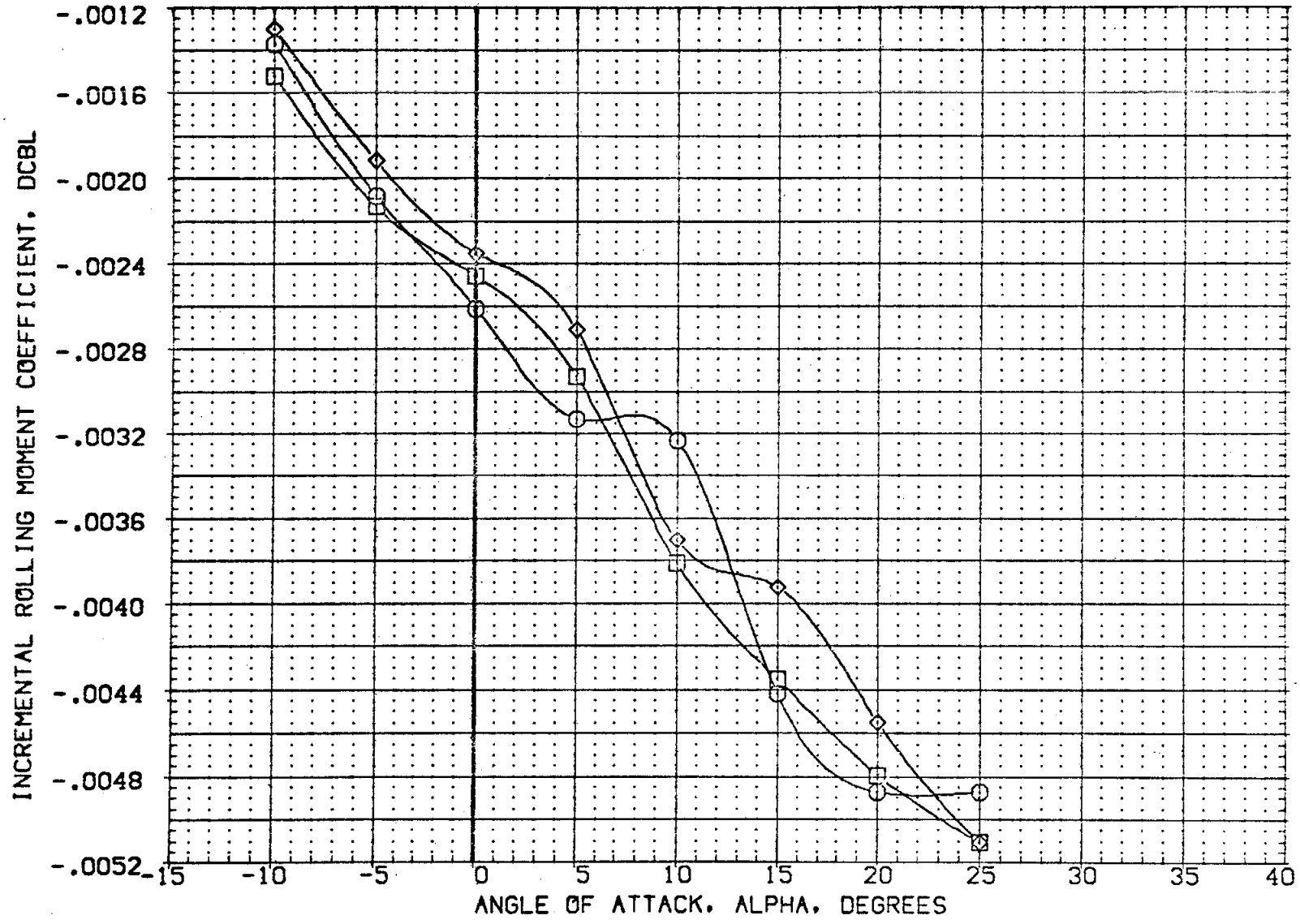


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2015)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2008)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. X0
YMRP	.0000	IN. Y0
ZMRP	375.0000	IN. Z0
SCALE	.0100	

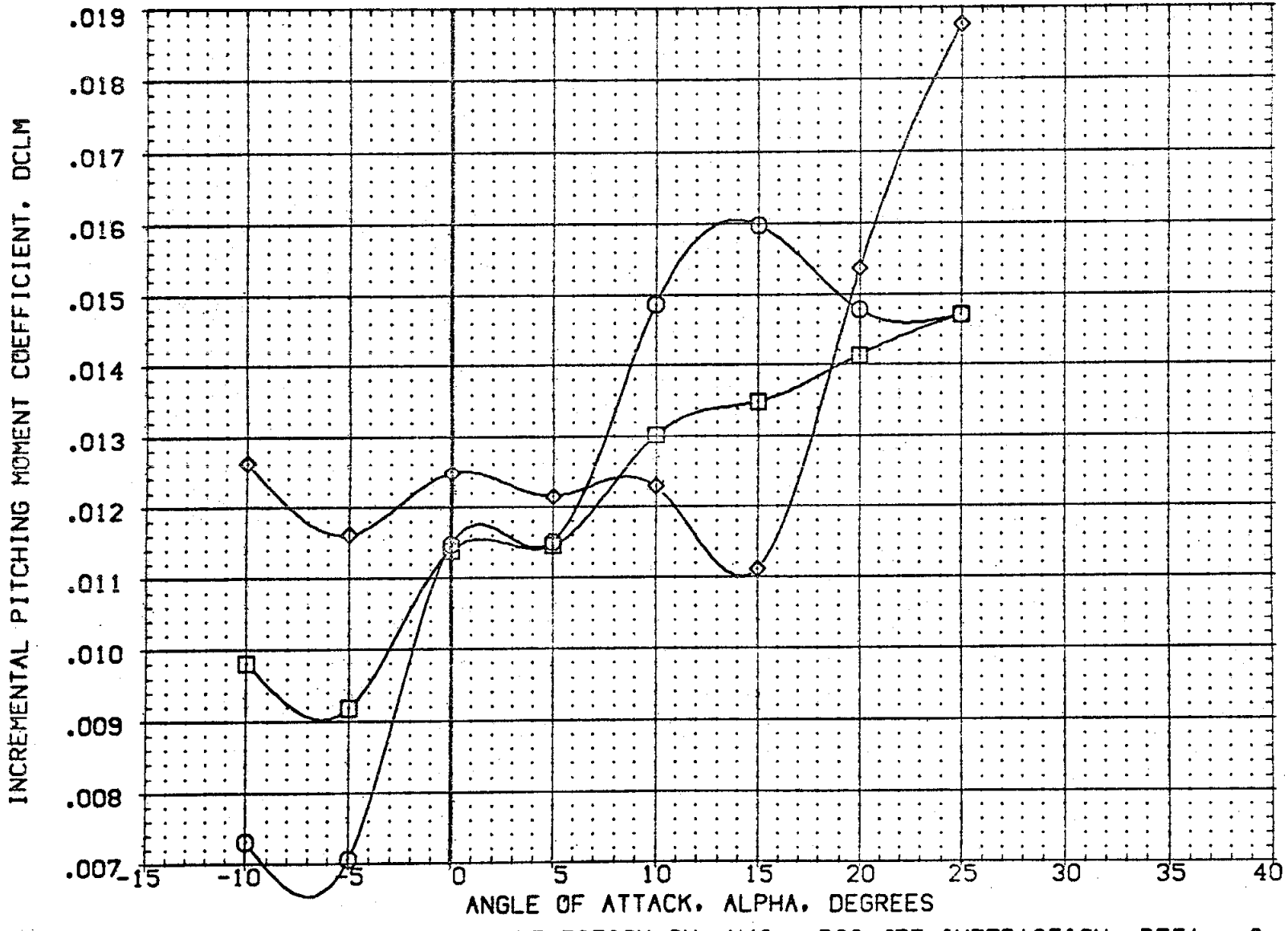


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2015) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(CH2025) □	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(CH2008) ◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

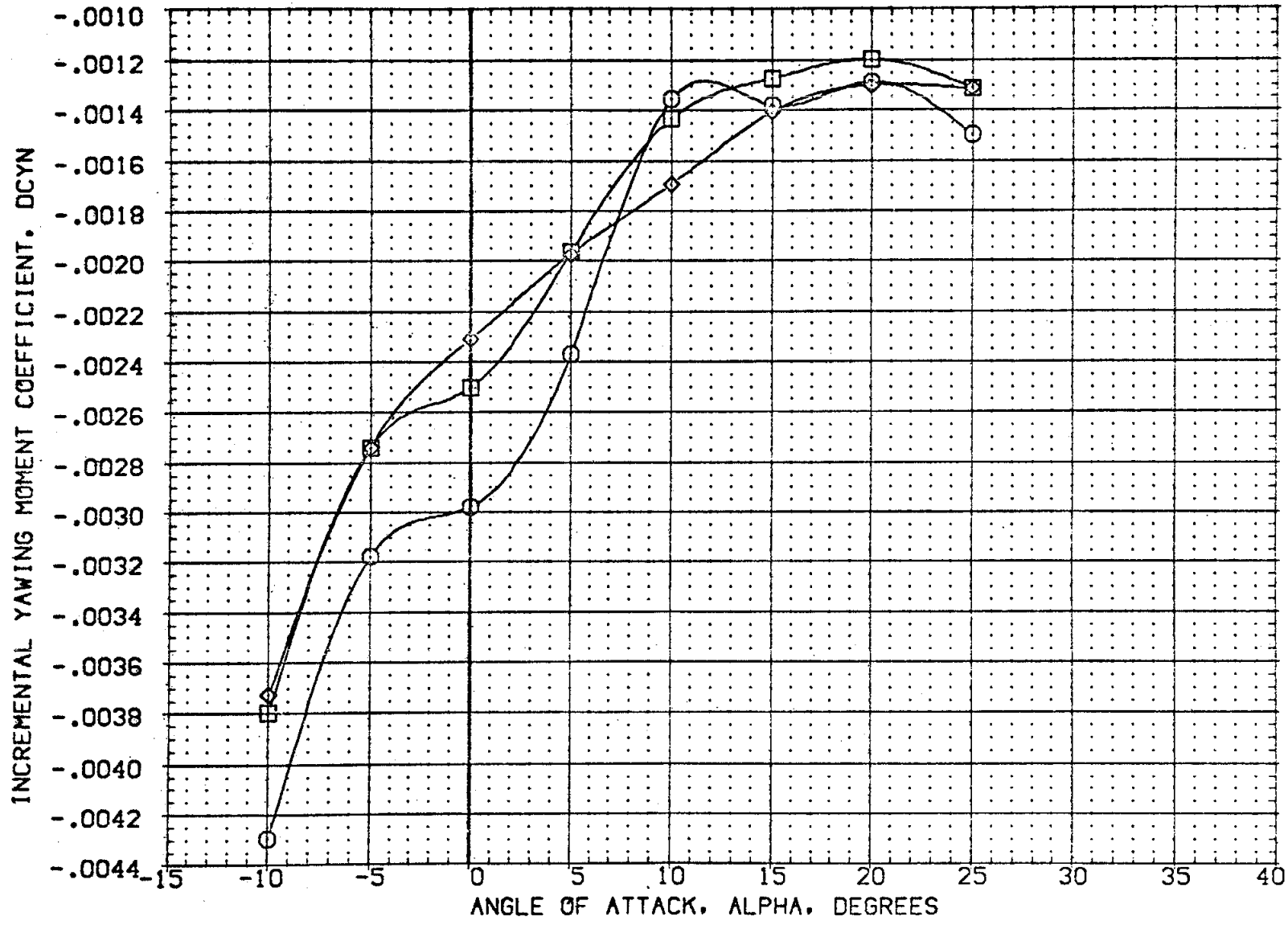


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH21SN)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(ZH22SN)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(ZH20SN)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▽	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	⊳	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

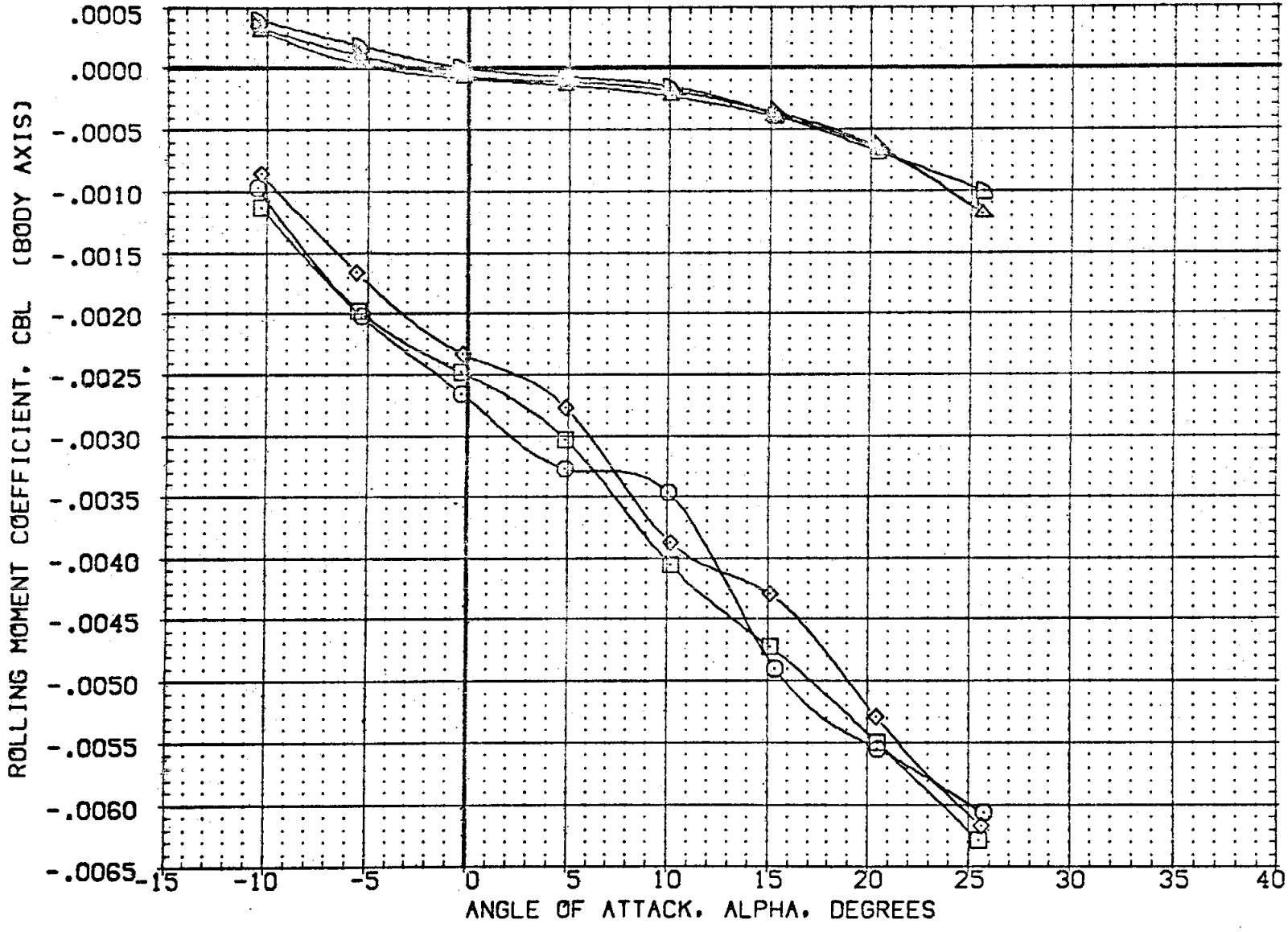


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH21SN)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(ZH22SN)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(ZH20SN)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000
(ZH202F)	△	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	▷	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	▽	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

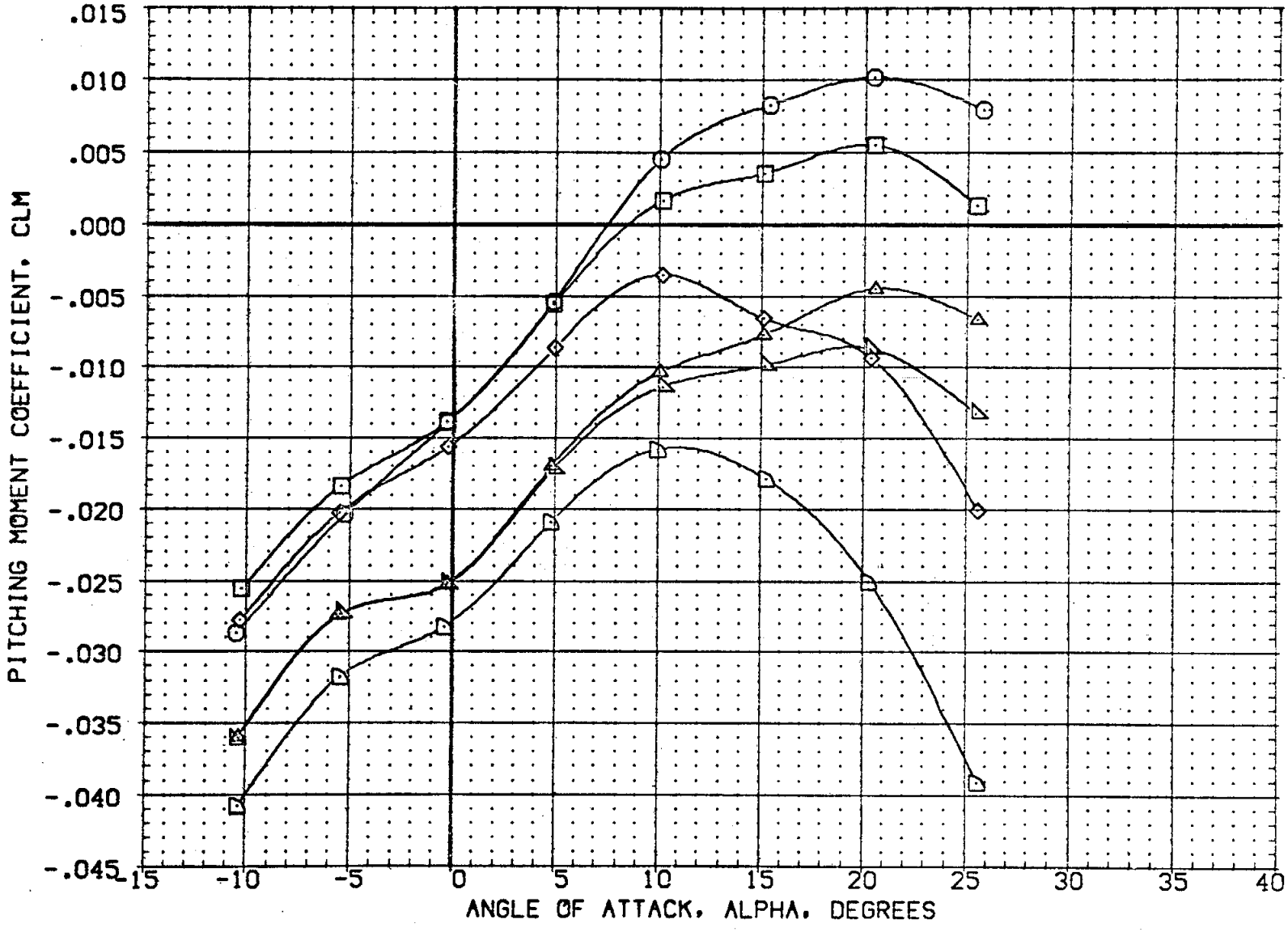


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(ZH215N)	□	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	-14.250	158.000	.000	20.000
(ZH225N)	◇	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	.000	158.000	.000	20.000
(ZH208N)	△	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	158.000	.000	20.000
(ZH202F)	◇	0A105 CFHT109 MODEL 32 0(0) NN52	RCS OFF	-14.250	.000	.000	.000
(ZH203F)	○	0A105 CFHT109 MODEL 32 0(0) NN51	RCS OFF	.000	.000	.000	.000
(ZH201F)	□	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

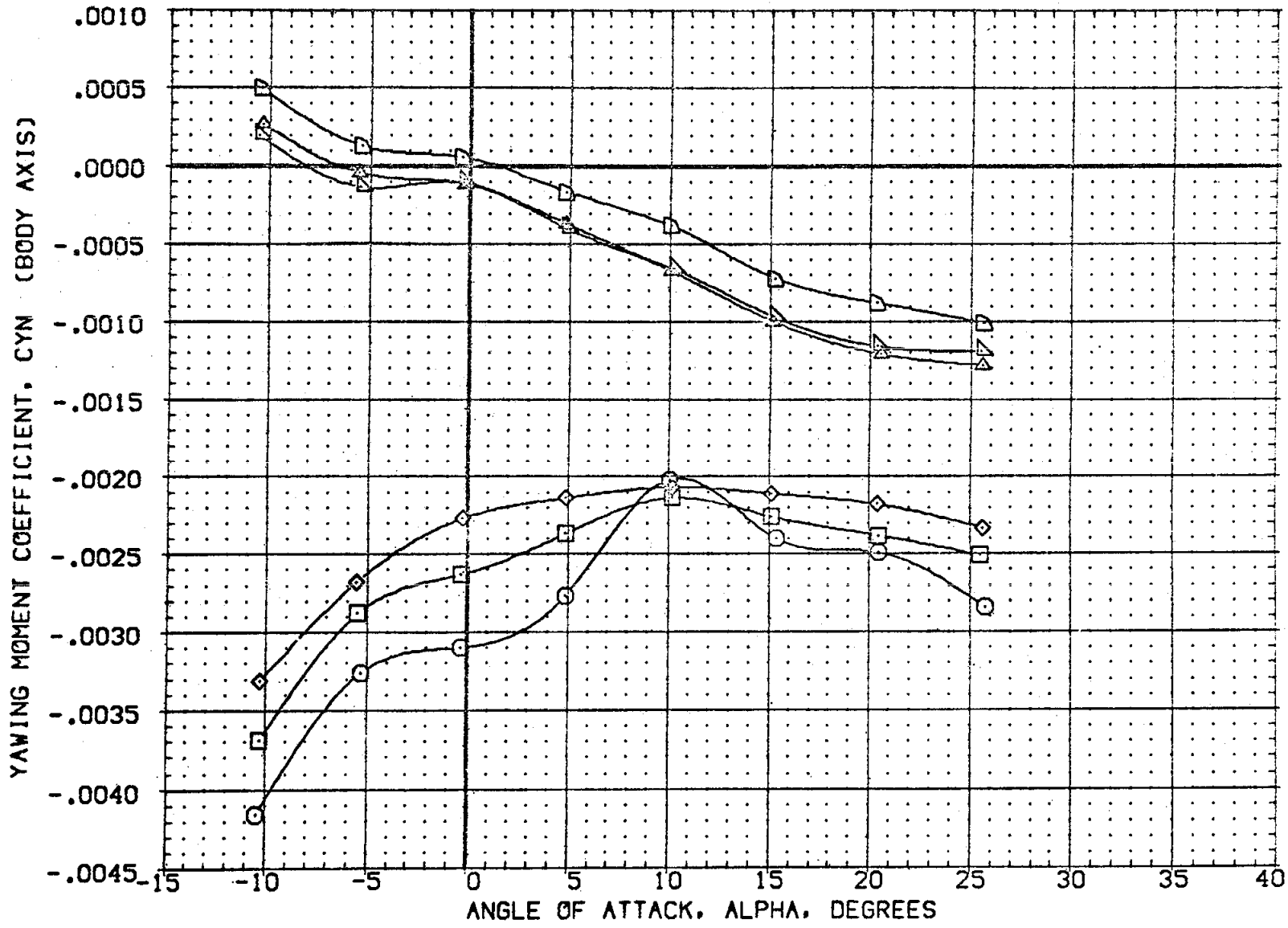


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2007) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

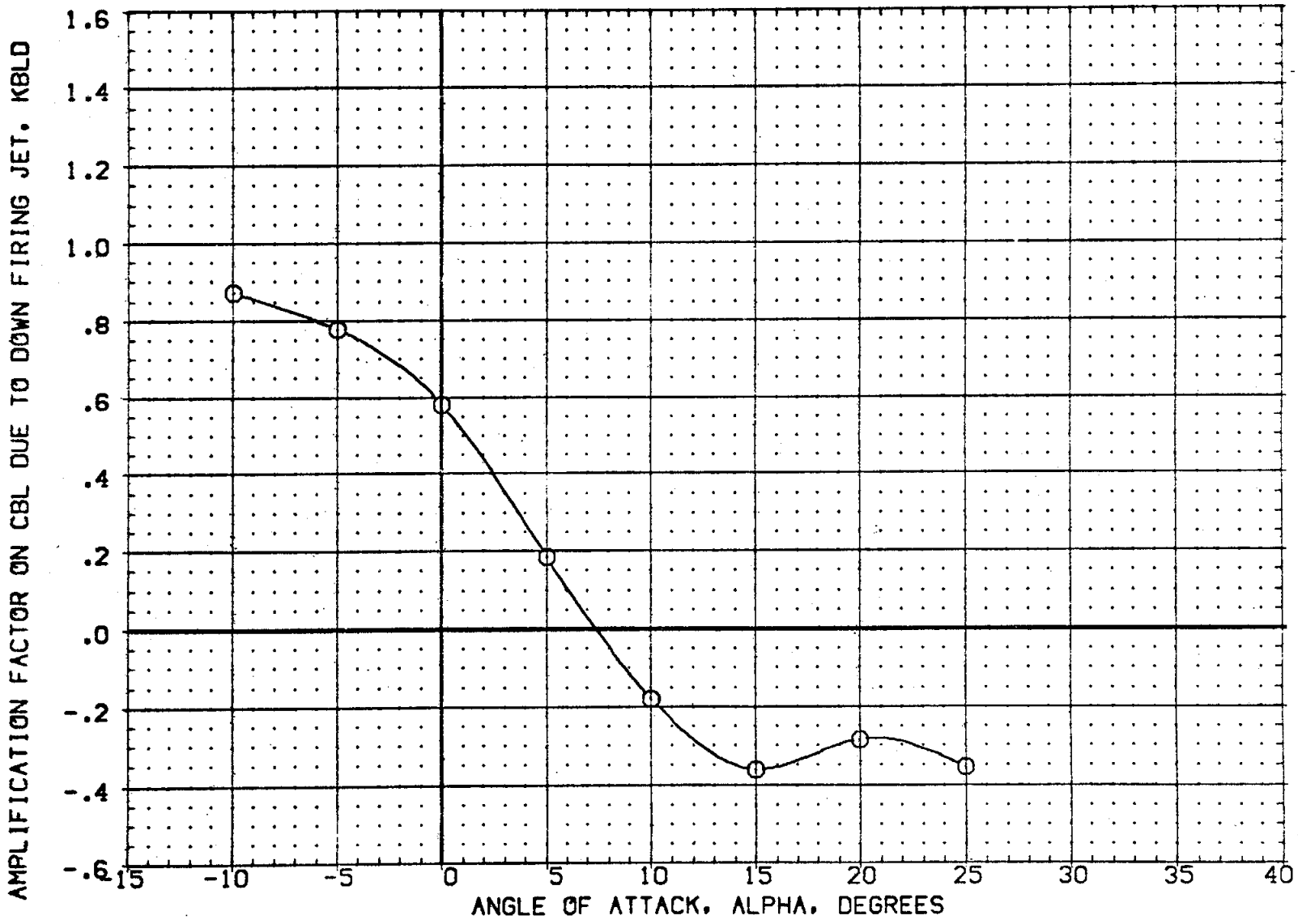


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL CONFIGURATION DESCRIPTION

			BDFLAP	PCRCS	ELEVON	Q-SIM
(CH2007)	○	0A105 CFXT103 MODEL 32-0 (0)N49 PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

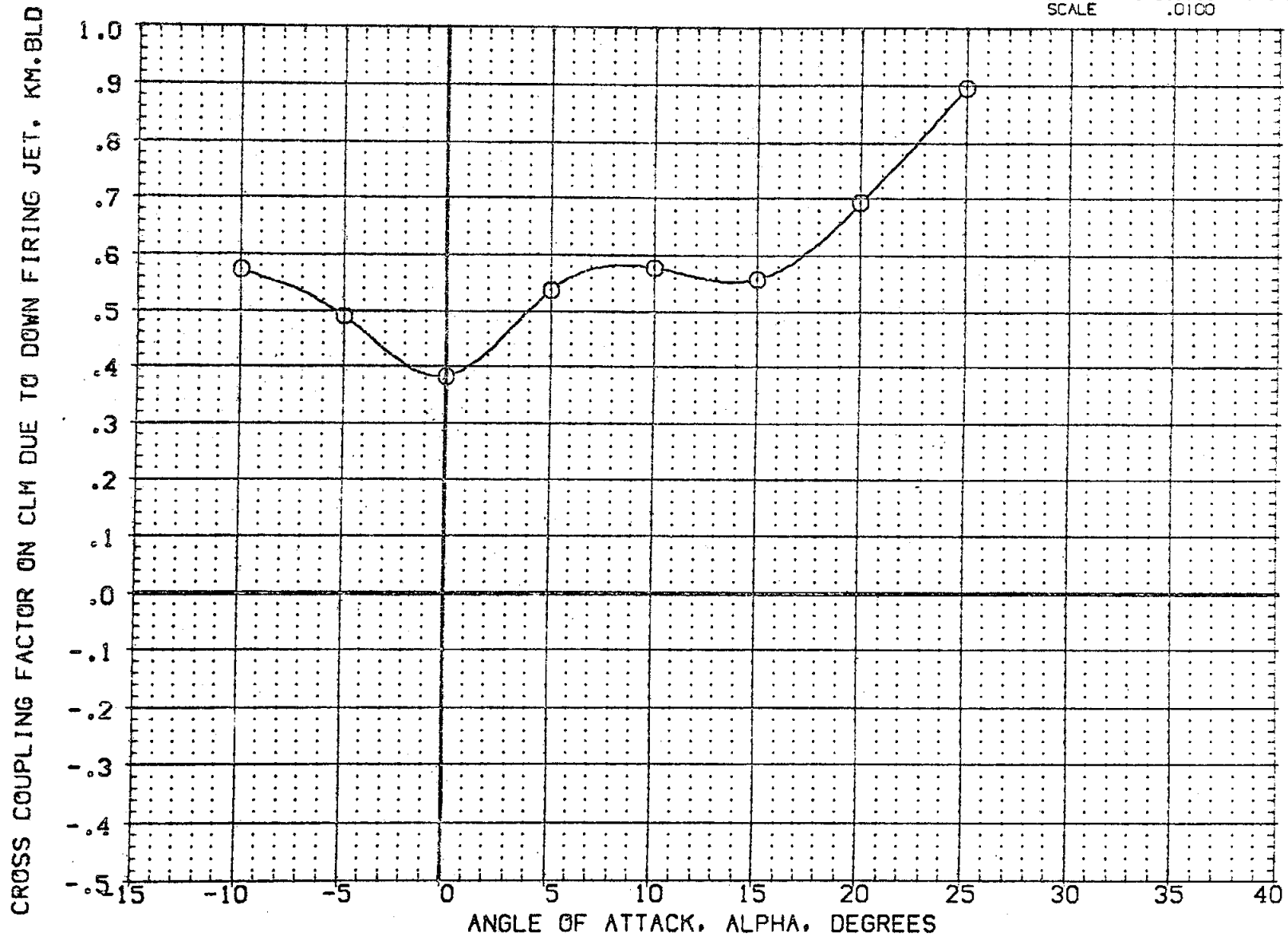


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BOFLAP	PCRCS	ELEVON	Q-SIM
(CH2007) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

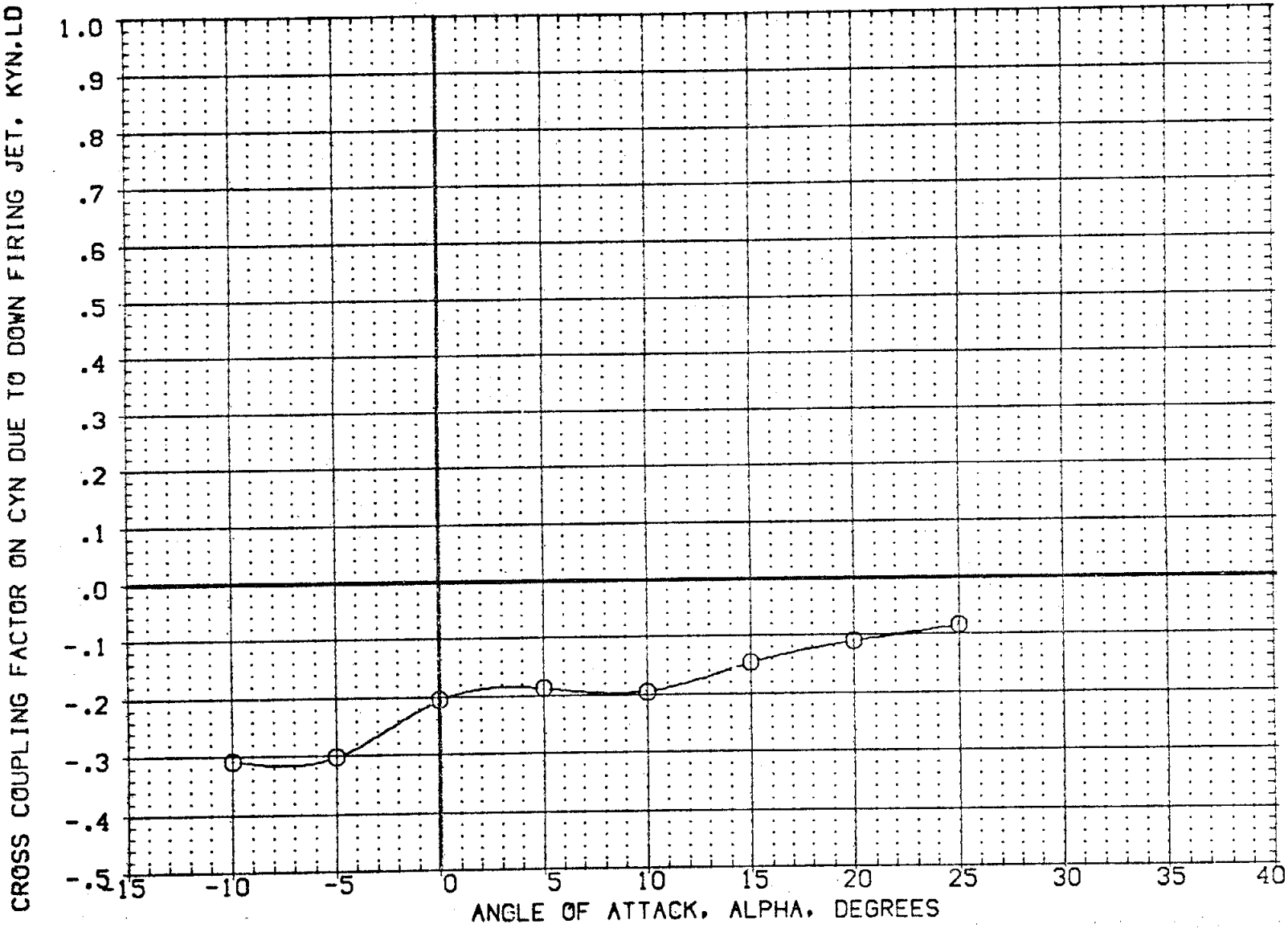


FIG 15 EFFECT OF BOFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	G-SIM
(CH2007) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

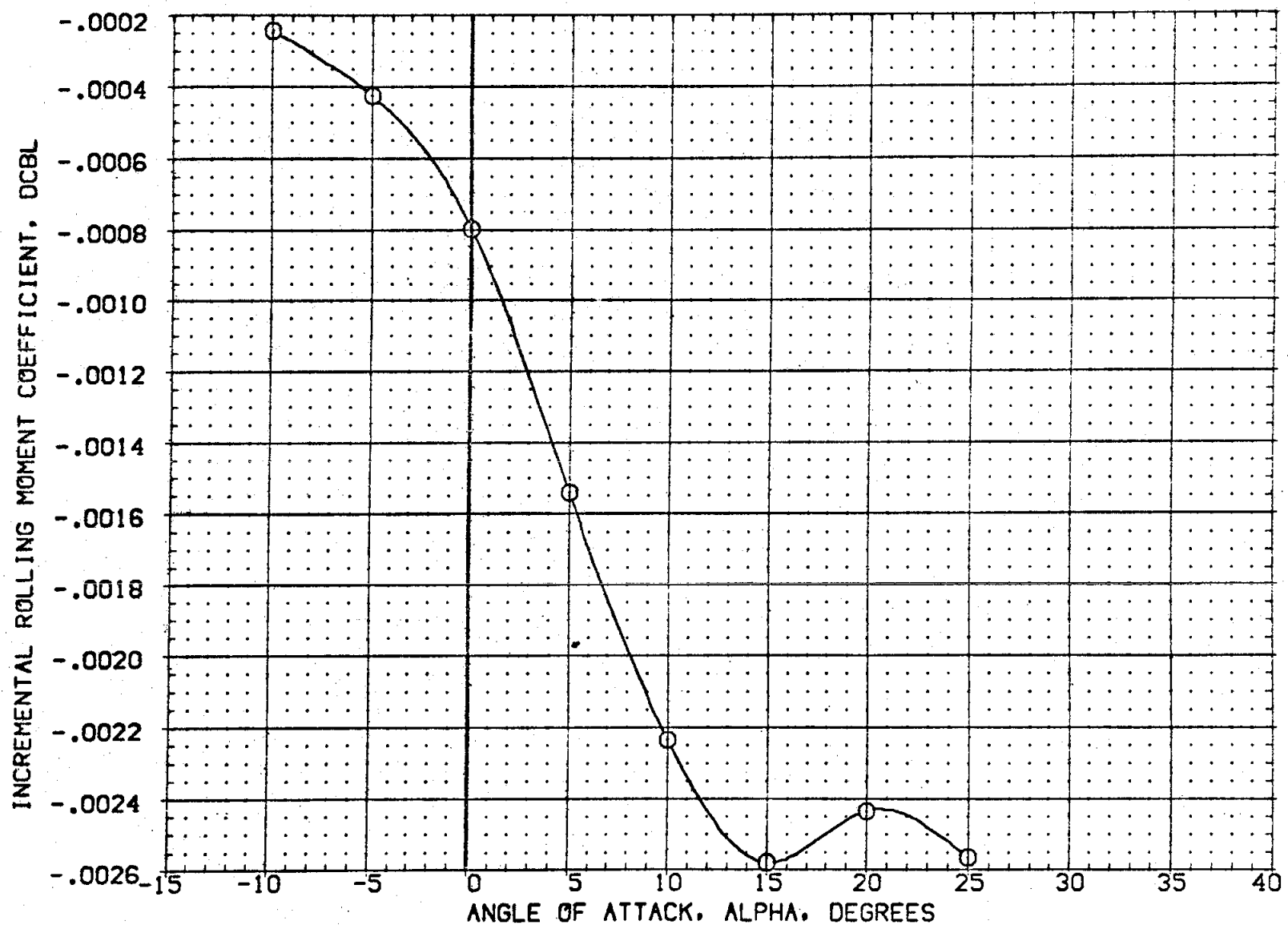


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2007) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

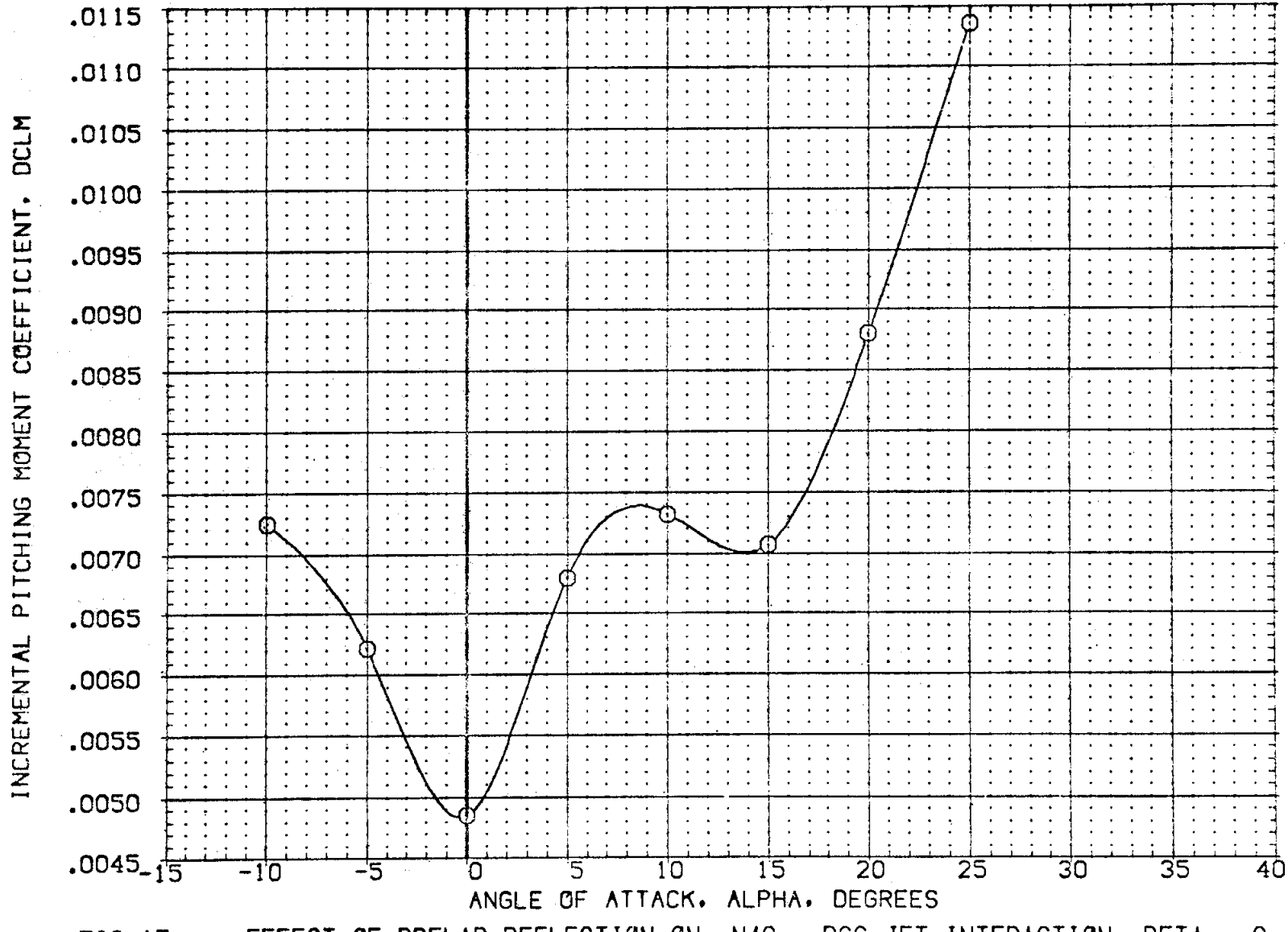


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	O-SIM
(CH2007) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XC
YMRP	.0000	IN. YC
ZMRP	375.0000	IN. ZC
SCALE	.0100	

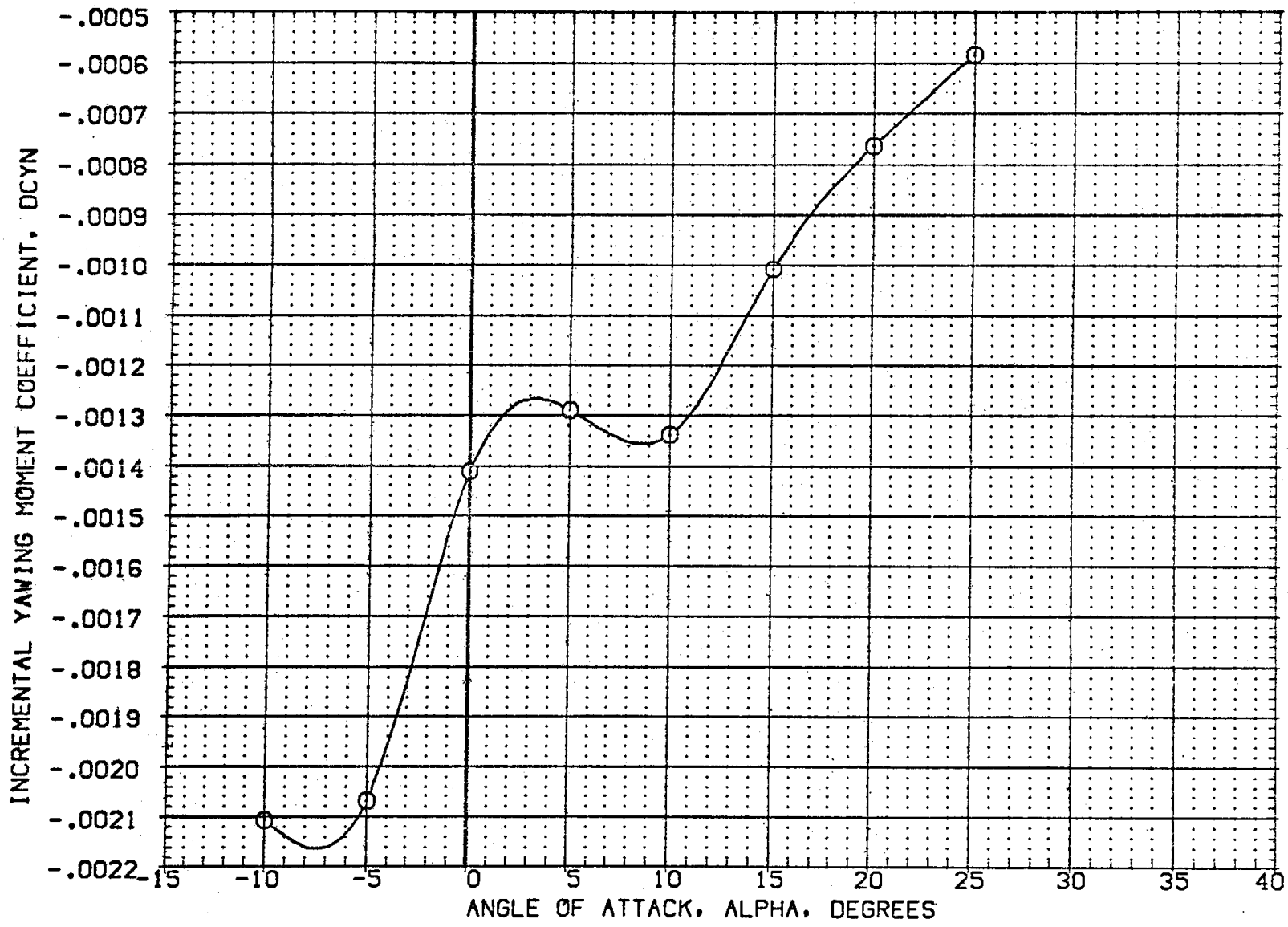


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH207N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000
(ZH201F)	□	0A105 CFHT109 MODEL 32 0(0) NSI	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

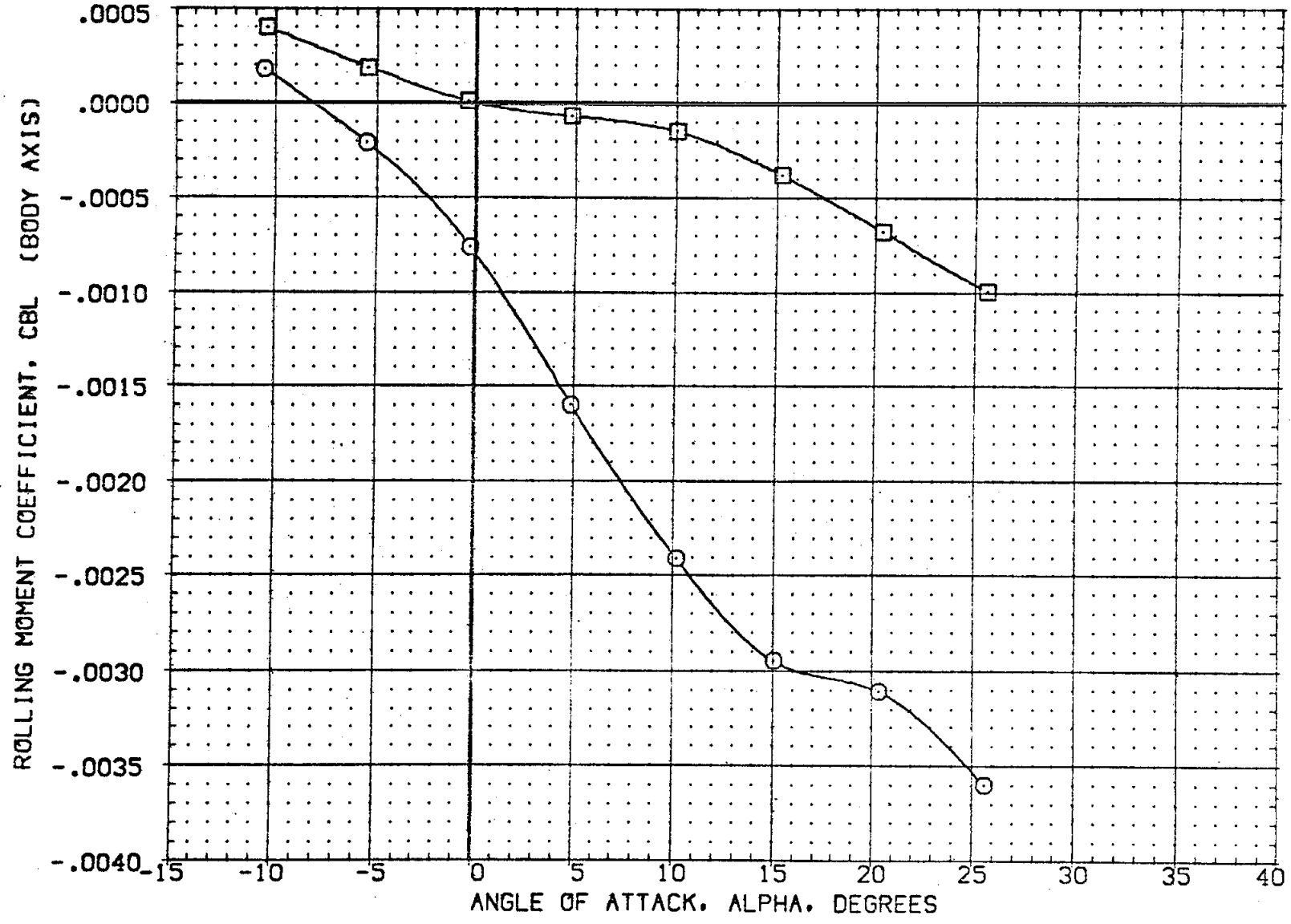


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH207N) ○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000
(ZH201F) □	0A105 CFHT109 MODEL 32 0(0) NSI	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

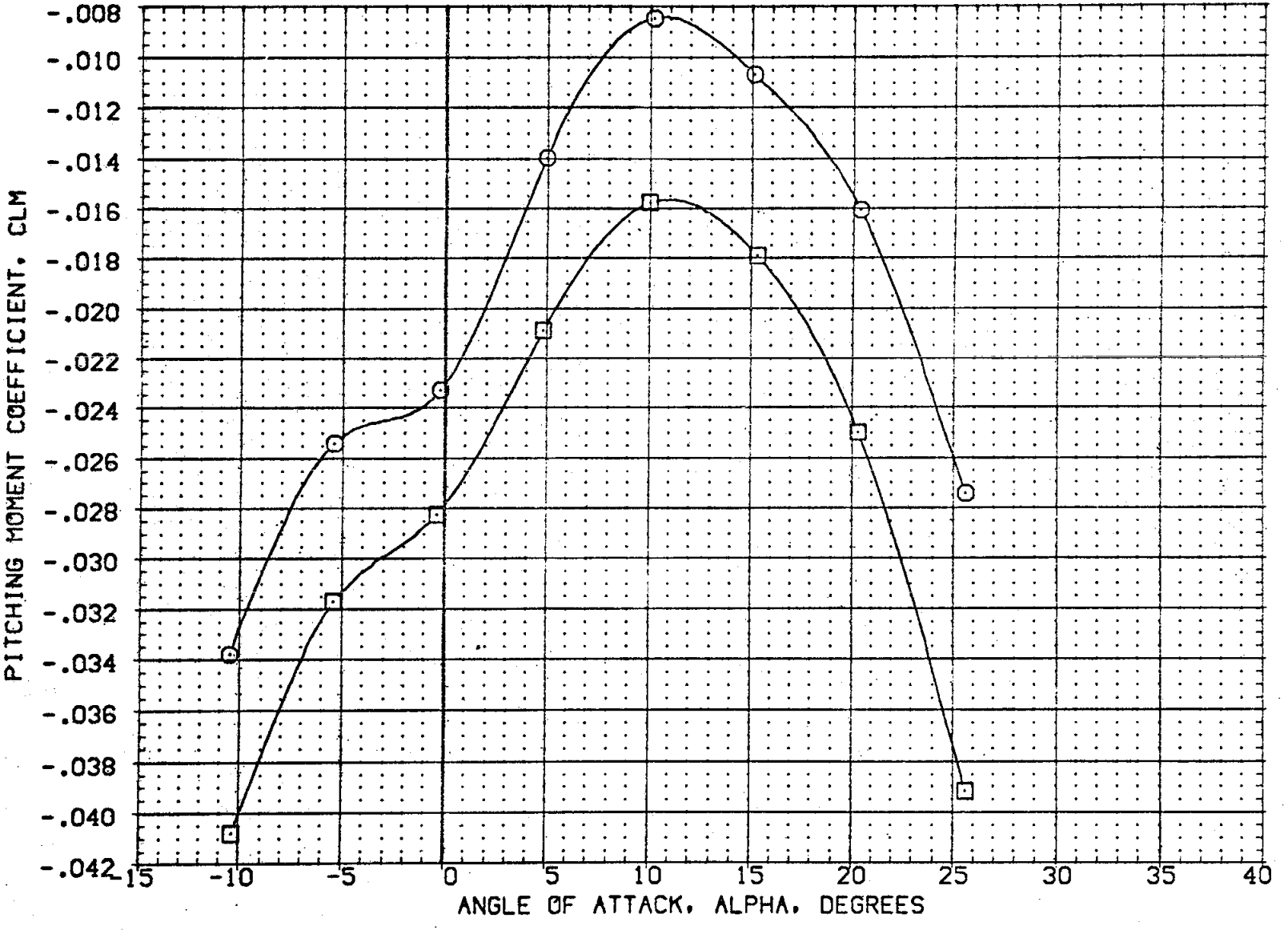


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		BDFLAP	PCRCS	ELEVON	Q-SIM
(ZH207N)	○	0A105 CFHT109 MODEL 32-0 (0)N49	PITCH DOWN	13.750	62.000	.000	50.000
(ZH201F)	□	0A105 CFHT109 MODEL 32 0(0) N51	RCS OFF	13.750	.000	.000	.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	474.8100	IN.
BREF	936.6800	IN.
XMRP	1076.6700	IN. XO
YMRP	.0000	IN. YO
ZMRP	375.0000	IN. ZO
SCALE	.0100	

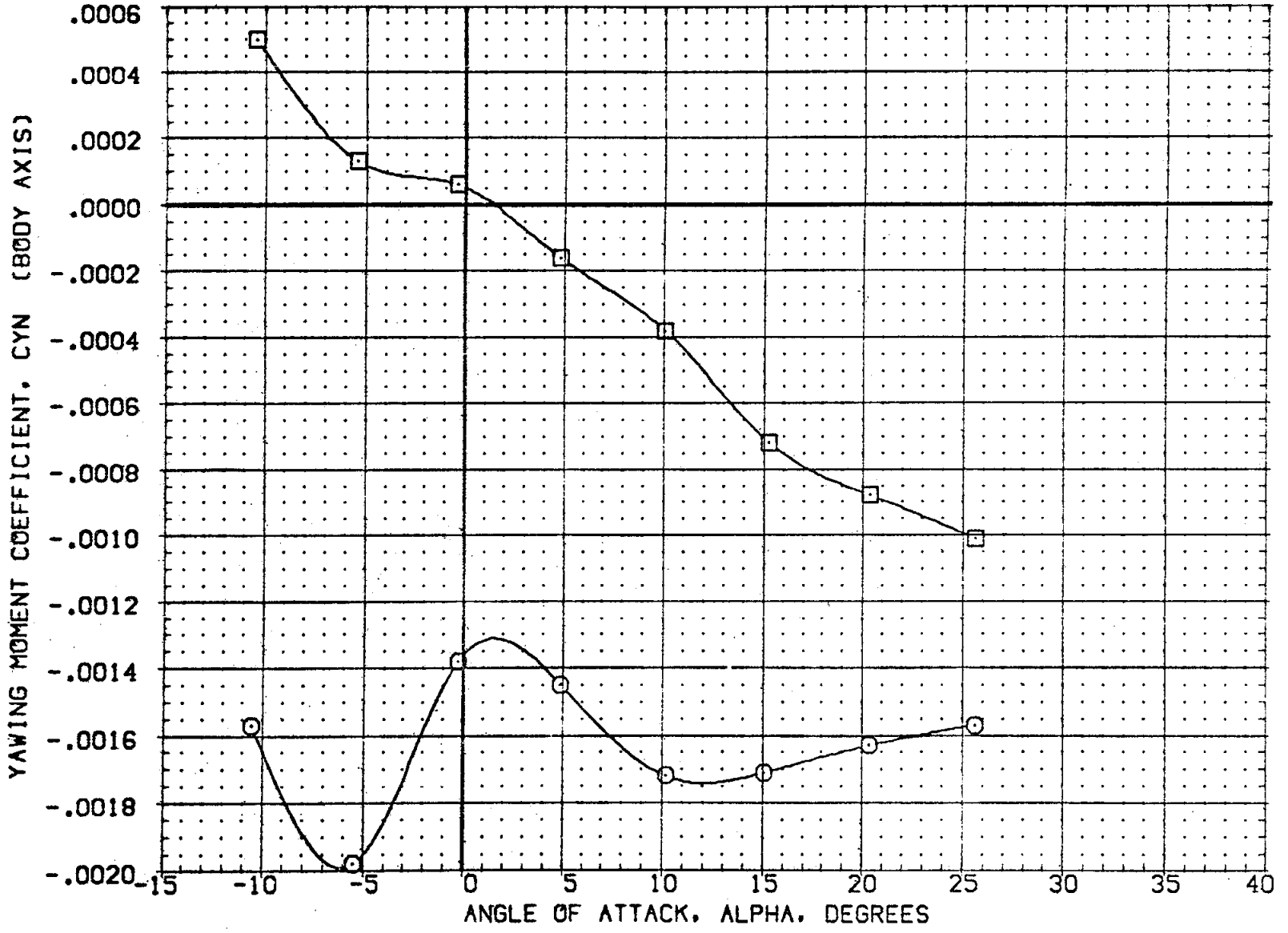


FIG 15 EFFECT OF BDFLAP DEFLECTION ON N49 RCS JET INTERACTION, BETA = 0

(A)MACH = 10.33

APPENDIX

TABULATED SOURCE DATA
(0A105 and selected data from 0A85)

Plotted data tabulations are available from the DMS on request.

OA105 CFHT109 MODEL 32 O(O) N51 RCS OFF (ZH201F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	13.750
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 3/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.418	-.00465	-.21504	.12353	-.04080	.00040	.00050	-.00140	-.18916	.16038	.16191
10.330	-5.425	-.00070	-.14131	.10592	-.03173	.00019	.00013	-.00126	-.13067	.11881	.07796
10.330	-.384	.00075	-.06051	.08565	-.02823	.00001	.00006	-.00197	-.05993	.08606	.11969
10.330	4.819	.00247	.02433	.07429	-.02089	-.00007	-.00016	-.00204	.01800	.07607	.11960
10.330	10.024	.00448	.13736	.06918	-.01577	-.00015	-.00038	-.00327	.12322	.09294	.16171
10.330	15.287	.00720	.29793	.06637	-.01790	-.00038	-.00072	-.00506	.26989	.14257	.11950
10.330	20.348	.00944	.48737	.06623	-.02502	-.00068	-.00088	-.00746	.43393	.23157	.11989
10.330	25.626	.01025	.70998	.06670	-.03917	-.00100	-.00101	-.01076	.61129	.36720	.07786
	GRADIENT	.00033	.01631	-.00218	.00141	-.00002	-.00004	-.00001	.01498	-.00192	-.00002

OA105 CFHT109 MODEL 32 O(O) NN52 RCS OFF (ZH202F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	-14.250
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 16/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.385	-.00201	-.19864	.11645	-.03602	.00031	.00027	-.00295	-.17440	.15035	-.00645
10.330	-5.554	.00062	-.13253	.09945	-.02750	.00004	-.00004	-.00246	-.12228	.11181	-.00636
10.330	-.240	.00097	-.05387	.08006	-.02520	-.00008	-.00011	-.00271	-.05354	.08028	-.04829
10.330	4.833	.00359	.02231	.06984	-.01694	-.00014	-.00037	-.00289	.01634	.07147	-.04812
10.330	10.056	.00734	.12687	.06503	-.01035	-.00023	-.00067	-.00417	.11357	.08618	-.04812
10.330	15.148	.00962	.26279	.06132	-.00773	-.00039	-.00100	-.00545	.23764	.12786	-.00601
10.330	20.541	.01172	.44440	.06128	-.00448	-.00068	-.00121	-.00804	.39465	.21331	-.00601
10.330	25.585	.00957	.63931	.06002	-.00667	-.00118	-.00128	-.01039	.55071	.33022	-.09032
	GRADIENT	.00052	.01502	-.00201	.00163	-.00001	-.00005	-.00004	.01377	-.00174	.00003

OA105 CFHT109 MODEL 32 O(O) NN51 RCS OFF (ZH203F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN.	XO	
LREF =	474.8100 IN.	YMRP =	.0000 IN.	YO	
BREF =	936.6800 IN.	ZMRP =	375.0000 IN.	ZO	
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 25/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.569	-.00214	-.19964	.11562	-.03630	.00034	.00020	-.00233	-.17505	.15028	.16151
10.330	-5.456	.00064	-.13145	.09832	-.02741	.00011	-.00013	-.00179	-.12150	.11037	.16181
10.330	-.346	.00206	-.05543	.07996	-.02532	-.00006	-.00010	-.00269	-.05494	.08030	.20363
10.330	4.851	.00472	.02175	.06890	-.01722	-.00011	-.00040	-.00259	.01585	.07049	.16161
10.330	10.191	.00764	.12810	.06453	-.01137	-.00019	-.00066	-.00389	.11466	.08618	.20373
10.330	15.188	.01042	.26536	.06179	-.00985	-.00036	-.00097	-.00522	.23990	.12916	.16171
10.330	20.344	.01191	.43959	.06116	-.00869	-.00065	-.00116	-.00784	.39091	.21017	.20373
10.330	25.501	.01037	.63638	.05959	-.01328	-.00118	-.00119	-.01017	.54873	.32776	.16151
	GRADIENT	.00051	.01485	-.00213	.00156	-.00001	-.00006	.00002	.01362	-.00189	-.00809

OA105 CFHT109 MODEL 32 O(O) NN49N52 RCS OFF (ZH204F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN.	XO	
LREF =	474.8100 IN.	YMRP =	.0000 IN.	YO	
BREF =	936.6800 IN.	ZMRP =	375.0000 IN.	ZO	
SCALE =	.0100				

PARAMETRIC DATA

ALPHA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 28/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-5.102	-.27879	-.05294	.08095	-.02368	.00140	.00204	.05164	-.05255	.08121	.07767
10.330	-1.999	-.28076	-.05163	.07964	-.02491	.00049	.00080	.01873	-.05124	.07989	.07767
10.330	.076	-.28211	-.05136	.08086	-.02539	-.00008	-.00007	-.00372	-.05096	.08111	.07786
10.330	2.072	-.28250	-.05384	.08008	-.02472	-.00050	-.00096	-.02433	-.05345	.08035	.07786
10.330	4.911	-.28152	-.05556	.08286	-.02358	-.00139	-.00160	-.05561	-.05515	.08313	.16191
	GRADIENT	-.00010	-.00063	.00041	.00021	-.00027	-.00035	-.01073	-.00063	.00041	.01180

OA105 CFHT109 MODEL 32 O(O) NN49 RCS OFF (ZH205F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.6100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 31/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.498	.00838	-.19865	.11520	-.03597	.00036	.00020	-.00274	-.17432	.14946	.07777
10.330	-5.422	.01197	-.12806	.09804	-.02741	.00012	-.00009	-.00258	-.11823	.10970	.07777
10.330	-.343	.01303	-.05311	.07989	-.02518	-.00004	-.00011	-.00326	-.05263	.08021	.11999
10.330	4.896	.01488	.02550	.06916	-.01696	-.00012	-.00039	-.00307	.01950	.07109	.07777
10.330	10.008	.01785	.12525	.06419	-.01143	-.00022	-.00071	-.00417	.11219	.08498	.11969
10.330	15.326	.01964	.26908	.06101	-.00987	-.00037	-.00100	-.00547	.24338	.12996	.07805
10.330	20.252	.02006	.43531	.06071	-.00865	-.00065	-.00118	-.00788	.38739	.20764	.07796
10.330	25.391	.01929	.63594	.05963	-.01327	-.00114	-.00118	-.01067	.54886	.32673	.07796
	GRADIENT	.00035	.01500	-.00205	.00157	-.00002	-.00005	.00004	.01377	-.00174	-.00806

OA105 CFHT109 MODEL 32 O(O) NN52 RCS OFF (ZH206F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.6100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	-20.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	.000		

RUN NO. 34/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.632	.00678	-.22988	.12335	-.01662	.00070	.00021	-.00263	-.20318	.16364	.11979
10.330	-5.326	.01080	-.14917	.10127	-.01373	.00028	-.00017	-.00215	-.13913	.11468	.07786
10.330	-.266	.01104	-.06430	.08263	-.01701	.00006	-.00013	-.00294	-.06391	.08292	.03584
10.330	4.967	.01438	.01657	.07135	-.01020	-.00005	-.00041	-.00295	.01033	.07252	.07805
10.330	9.991	.01704	.11589	.06529	-.00272	-.00017	-.00074	-.00421	.10281	.08449	.11999
10.330	15.326	.01739	.25105	.06119	.00378	-.00033	-.00111	-.00522	.22594	.12538	.03566
10.330	20.449	.02082	.41578	.06120	.01221	-.00053	-.00128	-.00796	.36820	.20261	.12008
10.330	25.583	.01858	.59972	.05944	.01713	-.00098	-.00133	-.01020	.51525	.31258	.07786
	GRADIENT	.00064	.01545	-.00216	.00130	-.00002	-.00005	-.00000	.01419	-.00199	.00807

OA105 CFHT109 MODEL 32 O(O) NN49N52 RCS OFF (ZH207F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = .000 ELEVON = .000
AILRON = 15.000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = .000

RUN NO. 39/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.502	-.01343	-.20482	.11832	-.03237	.00531	.00121	-.00423	-.17982	.15367	-.00627
10.330	-5.323	.00228	-.13101	.09943	-.02537	.00381	.00037	-.00344	-.12122	.11115	-.00636
10.330	-.343	.01162	-.05397	.08242	-.02603	.00286	-.00012	-.00383	-.05348	.08274	.03602
10.330	4.859	.02256	.03077	.07320	-.02152	.00359	-.00111	-.00296	.02446	.07555	-.00636
10.330	9.978	.04050	.13579	.06826	-.01995	.00577	-.00233	-.00323	.12191	.09076	-.00627
10.330	15.338	.07028	.28984	.06791	-.02402	.00932	-.00389	-.00378	.26156	.14215	.03575
10.330	20.280	.10894	.46152	.06964	-.02721	.01296	-.00543	-.00525	.40878	.22529	-.04829
10.330	25.483	.15265	.66898	.07180	-.03470	.01667	-.00695	-.00670	.57301	.35264	-.00609
	GRADIENT	.00210	.01629	-.00177	.00087	.00014	-.00019	.00017	.01498	-.00138	-.00815

OA105 CFHT109 MODEL 32 O(O) NN49N52 RCS OFF (ZH208F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = .000 ELEVON = .000
AILRON = -15.000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = .000

RUN NO. 41/ 0 RN/L = 1.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.538	.02263	-.20606	.11827	-.03417	-.00422	-.00064	-.00170	-.18096	.15396	-.04821
10.330	-5.487	.01679	-.13269	.10058	-.02668	-.00346	-.00052	-.00191	-.12246	.11280	-.00609
10.330	-.362	.00958	-.05495	.08221	-.02675	-.00288	.00001	-.00285	-.05443	.08255	-.00627
10.330	4.838	.00225	.02889	.07133	-.02147	-.00365	.00048	-.00363	.02277	.07351	-.00636
10.330	10.136	-.01304	.14132	.06859	-.02085	-.00653	.00124	-.00564	.12704	.09239	-.00627
10.330	15.116	-.03821	.28695	.06864	-.02518	-.01025	.00228	-.00833	.25912	.14109	.03575
10.330	20.263	-.07678	.46527	.07019	-.02910	-.01463	.00359	-.01197	.41217	.22698	.03575
10.330	25.456	-.12634	.67536	.07258	-.03724	-.01930	.00528	-.01592	.57860	.35582	.03593
	GRADIENT	-.00141	.01612	-.00209	.00102	-.00019	.00009	-.00015	.01485	-.00174	-.00002

OA105 CFHT109 MODEL 32 O(O) NN49N52 RCS OFF (ZH209F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	.000	RUDDER =	20.000
Q-SIN =	.000		

RUN NO. 43/ 0 RN/L = 1.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.558	.02631	-.19572	.10910	-.04741	.00289	-.00430	.00528	-.17242	.14311	-.00627
10.330	-5.474	.02673	-.12669	.09446	-.03501	.00202	-.00341	.00337	-.11710	.10611	-.04821
10.330	-.319	.02256	-.05193	.07817	-.02984	.00100	-.00198	.00029	-.05149	.07846	-.00601
10.330	4.935	.02148	.02651	.06645	-.01997	.00060	-.00170	-.00070	.02069	.06848	.03667
10.330	10.051	.02169	.12698	.06303	-.01287	.00028	-.00159	-.00257	.11403	.08423	-.00618
10.330	15.368	.01905	.27298	.05993	-.01038	-.00016	-.00138	-.00478	.24734	.13013	-.00618
10.330	20.222	.02035	.43844	.06052	-.00923	-.00050	-.00145	-.00772	.39050	.20834	-.00645
10.330	25.541	.01821	.64785	.05949	-.01419	-.00106	-.00137	-.01050	.55888	.33301	.03602
	GRADIENT	-.00021	.01493	-.00223	.00188	-.00008	.00005	-.00019	.01374	-.00190	.00812

OA105 CFHT109 MODEL 32 O(O) NN49N52 RCS OFF (ZH210F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	.000	RUDDER =	-20.000
Q-SIN =	.000		

RUN NO. 45/ 0 RN/L = 1.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	PCRCS
10.330	-10.645	-.00689	-.19728	.10987	-.04845	-.00129	.00316	-.00794	-.17359	.14442	-.04829
10.330	-5.504	-.00219	-.12845	.09497	-.03550	-.00121	.00223	-.00641	-.11875	.10685	-.04829
10.330	-.353	.00436	-.05397	.07868	-.03018	-.00068	.00101	-.00490	-.05349	.07901	-.00618
10.330	4.834	.00888	.02482	.06685	-.02024	-.00052	.00034	-.00420	.01910	.06870	-.04829
10.330	9.976	.01197	.12737	.06428	-.01348	-.00054	-.00009	-.00537	.11431	.08537	-.00601
10.330	15.184	.01602	.26941	.06118	-.01056	-.00053	-.00072	-.00611	.24398	.12961	-.04821
10.330	20.321	.01907	.44432	.06087	-.00953	-.00076	-.00096	-.00883	.39553	.21139	-.00618
10.330	25.533	.01714	.64880	.05944	-.01456	-.00125	-.00103	-.01117	.55981	.33329	-.00627
	GRADIENT	.00087	.01519	-.00228	.00192	.00003	-.00013	.00013	.01399	-.00199	-.00812

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH201N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	72.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	13.750
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	50.000		

RUN NO. 4/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.528	-.00028	-.20412	.11633	-.03756	.00046	-.00042	.00053	-.17943	.15167	-1.18305
10.330	-5.327	.00173	-.13403	.09638	-.02614	-.00051	-.00124	.00706	-.12450	.10841	-1.14846
10.330	-.293	.00545	-.05488	.08085	-.02579	-.00002	-.00076	-.00034	-.05446	.08113	-.67129
10.330	4.885	.00883	.02356	.06976	-.01792	-.00037	-.00135	.00093	.01753	.07151	.24519
10.330	10.054	.00704	.12294	.06407	-.01090	-.00160	-.00210	.00372	.10987	.08455	1.29946
10.330	15.301	-.00097	.27122	.06059	-.01295	-.00274	-.00156	.00086	.24561	.13002	1.88911
10.330	20.325	-.00307	.44933	.06156	-.01868	-.00313	-.00150	-.00200	.39997	.21380	1.87077
10.330	25.541	-.00840	.65964	.06240	-.02998	-.00360	-.00113	-.00580	.56827	.34071	1.66793
	GRADIENT	.00065	.01515	-.00214	.00152	-.00007	-.00011	.00025	.01390	-.00186	.17699

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH202N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	179.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	13.750
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	20.000		

RUN NO. 5/ 0 RN/L = 1.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.526	.00699	-.19716	.11216	-.03556	.00055	-.00163	.00299	-.17336	.14629	-1.18503
10.330	-5.481	.00121	-.13554	.09286	-.02739	-.00073	-.00189	.01277	-.12605	.10538	-1.19613
10.330	-.384	.01649	-.05718	.07728	-.02679	.00019	-.00312	.00690	-.05666	.07766	-.72952
10.330	4.865	.01937	.01379	.06549	-.01542	-.00072	-.00382	.00761	.00819	.06643	.12323
10.330	9.970	.01187	.10953	.05887	-.01214	-.00223	-.00367	.00856	.09768	.07694	1.26955
10.330	15.174	.00314	.25144	.05739	-.01291	-.00305	-.00265	.00490	.22765	.12121	1.87821
10.330	20.261	-.01207	.42067	.05900	-.01459	-.00494	-.00212	.00184	.37421	.20103	1.86149
10.330	25.467	-.02437	.62823	.06061	-.02504	-.00604	-.00189	.00015	.54113	.32485	1.66575
	GRADIENT	.00055	.01352	-.00225	.00217	-.00017	-.00013	.00014	.01235	-.00214	.16246

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH203N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	504.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	13.750
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	7.000		

RUN NO. 6/ 0 RN/L = 1.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.358	.00431	-.21537	.10790	-.02780	-.00218	-.00372	.02977	-.19246	.14486	-1.32853
10.330	-5.403	.01777	-.14055	.08794	-.02778	-.00064	-.00527	.02386	-.13165	.10078	-1.30626
10.330	-.413	.03247	-.07930	.07132	-.02720	-.00038	-.00634	.01596	-.07878	.07189	-1.09585
10.330	4.829	.03720	-.00522	.06119	-.02007	.00076	-.00720	.01682	-.01035	.06054	-.17102
10.330	10.018	.03126	.09818	.05580	-.01182	-.00117	-.00685	.01672	.08697	.07202	1.20756
10.330	15.148	-.00879	.23332	.05437	-.00672	-.00672	-.00370	.01100	.21100	.11345	1.85993
10.330	20.403	-.03777	.41272	.05698	-.00934	-.00943	-.00233	.00827	.36696	.19729	1.86002
10.330	25.661	-.04996	.62198	.05606	-.02051	-.00985	-.00235	.00688	.53549	.32168	1.66470
	GRADIENT	.00090	.01413	-.00193	.00136	.00022	-.00016	.00016	.01305	-.00217	.17643

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH204N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	62.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	13.750
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	50.000		

RUN NO. 7/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.540	.00125	-.20231	.11069	-.03251	-.00004	-.00028	-.00103	-.17864	.14583	-1.22503
10.330	-5.286	-.00645	-.13131	.09402	-.02293	-.00175	.00145	-.00389	-.12209	.10572	-1.15490
10.330	-.273	-.01624	-.05893	.07694	-.02063	-.00295	.00298	-.00782	-.05856	.07722	-.75829
10.330	4.892	-.02905	.01484	.06655	-.01381	-.00438	.00432	-.01005	.00911	.06757	.13477
10.330	10.103	-.02549	.11678	.05980	-.00970	-.00502	.00252	-.00698	.10447	.07936	1.31648
10.330	15.286	-.00591	.26071	.05660	-.01251	-.00331	-.00089	-.00222	.23656	.12333	1.91811
10.330	20.302	-.01725	.43461	.05849	-.01626	-.00429	.00042	-.00735	.38732	.20565	1.88337
10.330	25.478	-.02379	.64289	.05919	-.02607	-.00492	.00070	-.01047	.55491	.32998	1.68166
	GRADIENT	-.00248	.01428	-.00201	.00132	-.00028	.00026	-.00043	.01310	-.00187	.17291

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH205N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 8/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.354	-.01360	-.21118	.10565	-.02380	-.00374	.00380	-.00769	-.18826	.14254	-1.32073
10.330	-5.279	-.04942	-.14330	.08985	-.01127	-.00783	.00961	-.01540	-.13442	.10265	-1.30953
10.330	-.299	-.06028	-.07966	.07263	-.01387	-.00895	.01050	-.02155	-.07928	.07305	-1.08530
10.330	4.847	-.05106	-.00371	.06073	-.00738	-.00827	.00744	-.01608	-.00883	.06020	-.14671
10.330	10.000	-.02852	.10303	.05306	-.00665	-.00625	.00242	-.00532	.09225	.07014	1.31517
10.330	15.242	-.01821	.24557	.05150	-.00884	-.00527	-.00034	-.00027	.22340	.11425	1.95534
10.330	20.332	-.02782	.41913	.05330	-.01033	-.00637	-.00005	-.00378	.37449	.19561	1.91447
10.330	25.539	-.04462	.62722	.05407	-.02003	-.00771	.00083	-.00780	.54262	.31920	1.69992
	GRADIENT	.00179	.01476	-.00231	.00126	.00013	-.00059	.00106	.01369	-.00250	.18239

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH206N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 9/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.223	-.10168	-.26267	.09280	.01787	-.02252	.02526	-.04030	-.24203	.13795	-1.75446
10.330	-5.289	-.12891	-.19381	.07555	.01962	-.02503	.02732	-.05237	-.18602	.09309	-1.99827
10.330	-.296	-.08578	-.12005	.05428	.00462	-.01759	.01440	-.02547	-.11976	.05490	-2.18141
10.330	4.997	-.03454	-.03663	.04529	.00407	-.01020	.00334	-.00401	-.04043	.04193	-.96433
10.330	9.995	-.03014	.06904	.03980	.00733	-.00827	.00127	-.00050	.06108	.05118	1.19349
10.330	15.146	-.04654	.20875	.03747	.00676	-.00993	.00165	-.00169	.19171	.09071	2.11343
10.330	20.447	-.06742	.39497	.03982	.00332	-.01133	.00182	-.00160	.35617	.17529	2.03187
10.330	25.506	-.07678	.59111	.04019	-.00266	-.01187	.00194	-.00707	.51619	.29081	1.77504
	GRADIENT	.00968	.01576	-.00170	-.00010	.00140	-.00209	.00405	.01499	-.00245	.22994

OA105 CFHT109 MODEL 32-O (O)N49 PITCH DOWN (ZH207N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 62.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 50.000

RUN NO. 10/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.545	.00943	-.20092	.11355	-.03378	.00018	-.00157	.00142	-.17674	.14840	-1.19099
10.330	-5.477	.01042	-.13292	.09575	-.02540	-.00021	-.00198	.00255	-.12318	.10799	-1.14059
10.330	-.259	.00751	-.05527	.07865	-.02328	-.00076	-.00138	.00123	-.05492	.07890	-.69605
10.330	4.908	.00632	.02104	.06836	-.01399	-.00160	-.00145	.00100	.01512	.06991	.21625
10.330	10.171	.00487	.12524	.06231	-.00842	-.00241	-.00172	.00103	.11227	.08344	1.34549
10.330	15.104	.00089	.25904	.05882	-.01065	-.00295	-.00171	-.00047	.23477	.12428	1.88895
10.330	20.357	-.00080	.44302	.05922	-.01606	-.00311	-.00163	-.00330	.39475	.20963	1.88308
10.330	25.618	-.00611	.65453	.06009	-.02746	-.00360	-.00157	-.00626	.56420	.33718	1.67330
	GRADIENT	-.00023	.01477	-.00199	.00180	-.00016	-.00001	-.00004	.01356	-.00174	.17656

OA105 CFHT109 MODEL 32-O (O)N49 PITCH DOWN (ZH208N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 11/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.318	.01841	-.20497	.10861	-.02785	-.00086	-.00331	.00685	-.18220	.14357	-1.26908
10.330	-5.523	.01260	-.13966	.08994	-.02025	-.00166	-.00268	.00872	-.13036	.10296	-1.26605
10.330	-.262	.01074	-.06593	.07335	-.01564	-.00233	-.00227	.00571	-.06559	.07365	-.89065
10.330	4.917	.00693	.01532	.06305	-.00860	-.00277	-.00214	.00430	.00986	.06413	.15377
10.330	10.167	-.00009	.11746	.05649	-.00349	-.00388	-.00207	.00396	.10564	.07634	1.38387
10.330	15.115	-.00514	.25187	.05314	-.00659	-.00430	-.00211	.00318	.22930	.11698	1.96016
10.330	20.394	-.01202	.43398	.05418	-.00937	-.00529	-.00218	.00046	.38790	.20201	1.92016
10.330	25.650	-.02103	.64362	.05472	-.02015	-.00617	-.00233	-.00162	.55651	.32792	1.69708
	GRADIENT	-.00074	.01569	-.00199	.00136	-.00008	.00003	-.00027	.01457	-.00184	.20166

OA105 CFHT109 MODEL 32-O (O)N49 PITCH DOWN (ZH209N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 12/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.447	.03711	-.23970	.09561	-.00290	-.00636	-.00620	.02706	-.21839	.13749	-1.58838
10.330	-5.408	.01868	-.16749	.07444	.00217	-.00697	-.00416	.02181	-.15973	.08990	-1.77682
10.330	-.149	.02261	-.08674	.05887	.00175	-.00595	-.00470	.01267	-.08859	.05910	-1.49889
10.330	5.035	.01724	-.00602	.04852	.00855	-.00587	-.00470	.01165	-.01025	.04781	-.21447
10.330	10.095	.00555	.09925	.04189	.00817	-.00616	-.00432	.01102	.09037	.05864	1.54110
10.330	15.238	-.01039	.23852	.03933	.00743	-.00768	-.00402	.01083	.21980	.10063	2.18418
10.330	20.373	-.02006	.41131	.04026	.00544	-.00853	-.00416	.00965	.37156	.18094	2.05356
10.330	25.420	-.03423	.61180	.04161	-.00308	-.00975	-.00455	.00856	.53471	.30020	1.78115
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N52 PITCH UP (ZH210N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 62.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 50.000

RUN NO. 13/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.399	-.00881	-.20225	.11456	-.03576	.00025	.00138	-.00516	-.17772	.14981	-1.18633
10.330	-5.269	-.01863	-.12955	.09792	-.02560	-.00134	.00323	-.00908	-.12001	.10940	-1.09699
10.330	-.326	-.02201	-.05789	.07983	-.02432	-.00202	.00409	-.01190	-.05743	.08016	-.71651
10.330	4.653	-.03691	.02011	.07076	-.01641	-.00359	.00590	-.01446	.01405	.07221	.19460
10.330	10.015	-.02799	.12558	.06391	-.01543	-.00325	.00412	-.01337	.11256	.08478	1.32766
10.330	15.286	-.00440	.27729	.06182	-.02005	-.00153	.00083	-.00937	.25118	.13274	1.89227
10.330	20.364	-.01231	.45522	.06330	-.02346	-.00250	.00172	-.01376	.40474	.21775	1.85874
10.330	25.457	-.01688	.66108	.06441	-.03372	-.00312	.00198	-.01675	.56921	.34231	1.66285
	GRADIENT	-.00288	.01506	-.00175	.00153	-.00030	.00035	-.00049	.01389	-.00154	.17592

OA105 CFHT109 MODEL 32-O (O)N52 PITCH UP (ZH211N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 14/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.552	-.03357	-.20472	.11405	-.03268	-.00241	.00687	-.01623	-.18037	.14961	-1.20558
10.330	-5.232	-.06194	-.13423	.09946	-.01885	-.00607	.01203	-.02618	-.12469	.11128	-1.11966
10.330	-.362	-.07326	-.06458	.08155	-.01965	-.00724	.01307	-.02925	-.06407	.08196	-.78170
10.330	4.841	-.07252	.01249	.06964	-.01609	-.00711	.01149	-.02547	.00656	.07045	.09316
10.330	10.101	-.03596	.12278	.06121	-.01670	-.00398	.00520	-.01528	.11014	.08180	1.34649
10.330	15.090	-.00707	.26735	.06071	-.02134	-.00160	.00130	-.01032	.24233	.12822	1.88991
10.330	20.447	-.01258	.45330	.06209	-.02448	-.00247	.00188	-.01455	.40305	.21654	1.86136
10.330	25.528	-.02421	.66005	.06292	-.03453	-.00361	.00285	-.01880	.56859	.34123	1.66600
	GRADIENT	.00014	.01481	-.00229	.00068	.00002	-.00030	.00073	.01357	-.00221	.16815

OA105 CFHT109 MODEL 32-O (O)N52 PITCH UP (ZH212N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = 13.750
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 15/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.564	-.13576	-.22542	.11297	-.01596	-.01504	.03037	-.06443	-.20089	.15238	-1.31837
10.330	-5.299	-.16012	-.15455	.09521	-.01236	-.01954	.03347	-.07626	-.14519	.10907	-1.33029
10.330	-.260	-.13307	-.07980	.07729	-.02307	-.01384	.02339	-.04847	-.07945	.07765	-1.02317
10.330	4.957	-.06975	.00148	.06468	-.01973	-.00730	.01107	-.02426	-.00411	.06456	-.06367
10.330	9.937	-.03813	.10625	.05866	-.01719	-.00414	.00549	-.01431	.09453	.07611	1.24199
10.330	15.272	-.03951	.26046	.05815	-.02069	-.00430	.00528	-.01660	.23595	.12470	1.89216
10.330	20.447	-.04079	.44192	.06082	-.02548	-.00418	.00575	-.02178	.39283	.21136	1.85854
10.330	25.523	-.04960	.65004	.06118	-.03454	-.00515	.00629	-.02583	.56024	.33530	1.67086
	GRADIENT	.01214	.01558	-.00242	.00064	.00125	-.00236	.00464	.01444	-.00251	.18392

OA105 CFHT109 MODEL 32-O (O)N52 PITCH UP (ZH213N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = -14.250
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 17/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.492	-.03472	-.20427	.11341	-.03217	-.00254	.00699	-.01627	-.18020	.14871	-1.21175
10.330	-5.392	-.06194	-.13791	.09956	-.01832	-.00606	.01206	-.02610	-.12794	.11208	-1.14159
10.330	-.273	-.07371	-.06577	.08066	-.01857	-.00734	.01320	-.02914	-.06539	.08097	-.80757
10.330	4.903	-.07206	.01154	.06919	-.01378	-.00707	.01142	-.02529	.00558	.06993	.07980
10.330	9.987	-.03594	.11301	.06048	-.01132	-.00403	.00526	-.01520	.10081	.07916	1.27351
10.330	15.179	-.00591	.25820	.05892	-.01025	-.00156	.00120	-.01007	.23377	.12447	1.87810
10.330	20.298	-.01267	.42835	.05895	-.00577	-.00237	.00173	-.01398	.38130	.20389	1.87016
10.330	25.567	-.02209	.63111	.05860	-.00674	-.00351	.00264	-.01840	.54403	.32523	1.67275
	GRADIENT	.00032	.01494	-.00222	.00093	.00005	-.00034	.00074	.01371	-.00213	.17144

OA105 CFHT109 MODEL 32-O (O)N52 PITCH UP (ZH214N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = -14.250
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 18/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.596	-.13639	-.22465	.11264	-.01586	-.01495	.03031	-.06443	-.20011	.15203	-1.31621
10.330	-5.336	-.16182	-.15399	.09497	-.01195	-.01959	.03360	-.07641	-.14449	.10888	-1.32711
10.330	-.304	-.13372	-.08112	.07720	-.02252	-.01396	.02362	-.04906	-.08071	.07763	-1.03962
10.330	4.881	-.07264	-.00164	.06449	-.01778	-.00746	.01134	-.02472	-.00712	.06412	-.11100
10.330	9.943	-.03831	.10021	.05795	-.01186	-.00414	.00551	-.01446	.08870	.07438	1.19252
10.330	15.159	-.03875	.24593	.05647	-.00961	-.00431	.00522	-.01636	.22261	.11882	1.87356
10.330	20.320	-.03905	.42048	.05790	-.00717	-.00417	.00567	-.02175	.37420	.20031	1.86813
10.330	25.653	-.04824	.62701	.05665	-.00735	-.00508	.00613	-.02552	.54068	.32252	1.67644
	GRADIENT	.01178	.01533	-.00245	.00091	.00125	-.00237	.00469	.01419	-.00261	.17910

OA105 CFHT109 MODEL 32-0 (O)N49 PITCH DOWN (ZH215N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = -14.250
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 19/ 0 RN/L = 1.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.505	.02486	-.21574	.11167	-.02871	-.00097	-.00416	.00984	-.19176	.14913	-1.28586
10.330	-5.272	.01745	-.14263	.09231	-.02038	-.00202	-.00326	.01130	-.13354	.10503	-1.27149
10.330	-.329	.01545	-.07360	.07499	-.01394	-.00265	-.00310	.00873	-.07317	.07542	-.97027
10.330	4.864	.01164	.00607	.06338	-.00540	-.00327	-.00277	.00635	.00067	.06367	.01058
10.330	10.053	.00357	.10700	.05560	.00455	-.00347	-.00202	.00398	.09565	.07342	1.30275
10.330	15.380	-.00453	.25414	.05325	.00834	-.00490	-.00240	.00454	.23092	.11874	1.94464
10.330	20.455	-.01119	.42783	.05255	.01020	-.00555	-.00249	.00217	.38249	.19874	1.92452
10.330	25.783	-.01556	.63603	.05210	.00796	-.00607	-.00284	.00003	.55005	.32356	1.70001
	GRADIENT	-.00073	.01534	-.00224	.00164	-.00012	.00006	-.00046	.01422	-.00226	.18888

OA105 CFHT109 MODEL 32-0 (O)N49 PITCH DOWN (ZH216N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = -14.250
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 20/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.504	.05100	-.25208	.09636	.00299	-.00785	-.00792	.03206	-.23029	.14070	-1.63677
10.330	-5.240	.03389	-.17344	.07405	.00575	-.00800	-.00615	.02454	-.16596	.08958	-1.85266
10.330	-.274	.03398	-.10007	.05949	.00652	-.00729	-.00651	.01539	-.09978	.05996	-1.66404
10.330	4.962	.02750	-.01778	.04886	.01415	-.00674	-.00663	.01508	-.02194	.04714	-.46537
10.330	10.206	.01646	.08762	.04204	.01869	-.00710	-.00653	.01542	.07879	.05690	1.38460
10.330	15.234	-.00028	.21984	.03683	.02398	-.00849	-.00619	.01487	.20191	.09523	2.12014
10.330	20.593	-.01746	.39417	.03928	.03005	-.00999	-.00635	.01405	.35517	.17541	2.02480
10.330	25.497	-.03261	.57714	.04009	.03141	-.01135	-.00673	.01293	.50368	.28462	1.76967
	GRADIENT	-.00124	.01572	-.00203	.00146	.00011	-.00002	-.00006	.01487	-.00245	.22893

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH217N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	156.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	-14.250
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	20.000		

RUN NO. 21/ 0 RN/L = 1.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.606	-.00521	-.21389	.10487	-.02093	-.00401	.00251	-.00481	-.19093	.14245	-1.34034
10.330	-5.275	-.04346	-.14560	.08912	-.00858	-.00811	.00860	-.01305	-.13679	.10212	-1.33945
10.330	-.284	-.05501	-.08545	.07149	-.00955	-.00947	.00964	-.01964	-.08509	.07191	-1.18327
10.330	4.884	-.04528	-.00993	.05951	-.00223	-.00862	.00650	-.01396	-.01496	.05845	-.25603
10.330	10.170	-.02413	.09749	.05138	.00082	-.00622	.00151	-.00306	.08688	.06778	1.28182
10.330	15.155	-.01702	.22631	.04978	.00530	-.00596	-.00069	.00056	.20543	.10721	1.91613
10.330	20.491	-.02597	.40359	.05061	.00914	-.00662	-.00056	-.00227	.36033	.18868	1.90972
10.330	25.601	-.03946	.59835	.05007	.00874	-.00768	.00006	-.00598	.51797	.30370	1.70556
	GRADIENT	.00188	.01461	-.00232	.00142	.00016	-.00061	.00110	.01357	-.00260	.17942

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH218N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	446.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	-14.250
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	7.000		

RUN NO. 22/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.403	-.08466	-.27446	.09316	.02512	-.02378	.02310	-.03413	-.25313	.14118	-1.79290
10.330	-5.336	-.11748	-.20525	.07584	.02727	-.02638	.02584	-.04958	-.19731	.09460	-2.08575
10.330	-.179	-.06754	-.12619	.05412	.00981	-.01797	.01144	-.02009	-.12602	.05451	-2.31181
10.330	5.058	-.02039	-.04594	.04619	.01130	-.01121	.00097	-.00023	-.04983	.04196	-1.18776
10.330	10.003	-.01593	.05572	.04011	.01807	-.00916	-.00096	.00232	.04791	.04917	.97424
10.330	15.322	-.03986	.19654	.03780	.02355	-.01089	-.00039	.00222	.17957	.08639	2.03156
10.330	20.456	-.05841	.36495	.03919	.02833	-.01269	-.00045	.00204	.32824	.16426	1.99825
10.330	25.580	-.07545	.55337	.03863	.03136	-.01347	-.00008	-.00313	.48246	.27377	1.76229
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH219N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	179.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	-14.250
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	20.000		

RUN NO. 23/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLN	CBL	CYN	CY	CL	CD	L/D
10.330	-10.540	.00944	-.19818	.11230	-.03546	.00047	-.00164	.00253	-.17430	.14665	-1.18848
10.330	-5.219	.00450	-.13257	.09185	-.02679	-.00075	-.00199	.01259	-.12367	.10352	-1.19457
10.330	-.238	.01938	-.05706	.07667	-.02545	.00023	-.00336	.00699	-.05674	.07691	-.73775
10.330	4.981	.02216	.01549	.06482	-.01298	-.00066	-.00392	.00738	.00980	.06592	.14870
10.330	10.052	.01408	.10783	.05796	-.00682	-.00220	-.00382	.00808	.09606	.07589	1.26575
10.330	15.367	.00396	.24837	.05612	-.00147	-.00323	-.00279	.00428	.22462	.11993	1.87297
10.330	20.265	-.00860	.40956	.05635	.00376	-.00496	-.00236	.00172	.36469	.19472	1.87294
10.330	25.573	-.02138	.61140	.05578	.00215	-.00612	-.00216	.00014	.52742	.31424	1.67843
	GRADIENT	.00053	.01390	-.00227	.00239	-.00017	-.00011	.00007	.01275	-.00211	.16985

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH220N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	504.000	ELEVON =	.000
AILRON =	.000	BDFLAP =	-14.250
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	7.000		

RUN NO. 24/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLN	CBL	CYN	CY	CL	CD	L/D
10.330	-10.668	.00728	-.22276	.10855	-.02631	-.00254	-.00377	.03007	-.19882	.14791	-1.34421
10.330	-5.284	.02012	-.14222	.08741	-.02695	-.00070	-.00534	.02312	-.13357	.10014	-1.33386
10.330	-.391	.03249	-.08098	.07154	-.02646	-.00042	-.00629	.01540	-.08049	.07210	-1.11641
10.330	4.865	.03970	-.00667	.06148	-.01805	.00085	-.00725	.01637	-.01186	.06070	-.19548
10.330	10.190	.03211	.09774	.05503	-.00638	-.00130	-.00692	.01645	.08646	.07146	1.20999
10.330	15.186	-.00699	.22587	.05311	.00448	-.00680	-.00401	.01114	.29407	.11042	1.84807
10.330	20.354	-.03482	.39488	.05450	.00942	-.00943	-.00269	.00864	.35126	.18845	1.86401
10.330	25.519	-.04680	.59198	.05404	.00733	-.00989	-.00268	.00727	.51095	.30380	1.68183
	GRADIENT	.00137	.01414	-.00191	.00160	.00024	-.00018	.00018	.01306	-.00217	.17521

OA105 CFHT109 MODEL 32-O (O)N51 YAW (ZH221N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 504.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 26/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.621	.00651	-.22159	.10917	-.02699	-.00247	-.00364	.02958	-.19767	.14814	-1.33431
10.330	-5.302	.01680	-.14082	.08836	-.02789	-.00069	-.00520	.02277	-.13205	.10099	-1.30748
10.330	-.295	.03301	-.07812	.07221	-.02695	-.00038	-.00629	.01549	-.07775	.07261	-1.07075
10.330	4.931	.03860	-.00458	.06155	-.01833	.00086	-.00726	.01637	-.00985	.06093	-.16164
10.330	9.936	.03256	.09486	.05595	-.00796	-.00116	-.00701	.01654	.08378	.07148	1.17214
10.330	15.320	-.00795	.23252	.05380	.00210	-.00685	-.00387	.01069	.21004	.11332	1.85348
10.330	20.494	-.03578	.40269	.05414	.00518	-.00942	-.00264	.00844	.35825	.19170	1.86880
10.330	25.578	-.04890	.60292	.05413	.00044	-.00990	-.00257	.00679	.52046	.30913	1.68364
	GRADIENT	.00107	.01407	-.00204	.00165	.00024	-.00019	.00017	.01299	-.00223	.17396

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH222N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 27/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.402	-.09725	-.27167	.09376	.02193	-.02333	.02488	-.03876	-.25028	.14127	-1.77165
10.330	-5.314	-.12720	-.20023	.07627	.02399	-.02600	.02740	-.05260	-.19231	.09449	-2.03529
10.330	-.289	-.08036	-.12403	.05480	.00772	-.01800	.01364	-.02407	-.12375	.05543	-2.23265
10.330	4.946	-.03085	-.04419	.04564	.00856	-.01089	.00281	-.00358	-.04796	.04166	-1.15126
10.330	10.042	-.02673	.06157	.03971	.01460	-.00894	.00072	-.00075	.05370	.04984	1.07758
10.330	15.223	-.04748	.20277	.03711	.01832	-.01059	.00115	-.00055	.18591	.08905	2.08767
10.330	20.402	-.06593	.37465	.03786	.02063	-.01222	.00119	-.00070	.33795	.16609	2.03479
10.330	25.592	-.08024	.57210	.03765	.02127	-.01302	.00148	-.00621	.49971	.28108	1.77783
	GRADIENT	.00946	.01525	-.00175	.00016	.00136	-.00207	.00391	.01448	-.00263	.20657

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH223N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

ALPHA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 29/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALPHA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-5.137	-.21789	-.11967	.05592	.01684	-.01730	.01633	.01501	-.11945	.05637	-2.11899
10.330	-2.082	-.23701	-.12271	.05424	.00855	-.01661	.01392	-.00819	-.12248	.05475	-2.23725
10.330	.001	-.23141	-.12291	.05437	.00793	-.01786	.01337	-.02424	-.12269	.05487	-2.23601
10.330	1.995	-.21648	-.11898	.05491	.00869	-.01916	.01346	-.04148	-.11877	.05536	-2.14564
10.330	4.799	-.18052	-.10776	.05673	.01166	-.02219	.01822	-.07504	-.10758	.05707	-1.88506
	GRADIENT	.00832	.00223	.00036	.00047	-.00081	.00061	-.00971	.00222	.00034	.05229

OA105 CFHT109 MODEL 32-O (O)N49 PITCH DOWN (ZH224N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 30/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.498	.05931	-.24797	.09509	.00213	-.00724	-.00663	.02828	-.22650	.13868	-1.63319
10.330	-5.407	.04046	-.17324	.07363	.00524	-.00760	-.00461	.02171	-.16553	.08963	-1.84683
10.330	-.154	.04459	-.09568	.05801	.00508	-.00675	-.00521	.01285	-.09552	.05826	-1.63945
10.330	4.908	.03789	-.01653	.04828	.01242	-.00643	-.00531	.01216	-.02060	.04669	-.44124
10.330	10.101	.02693	.09101	.04143	.01553	-.00685	-.00509	.01185	.08233	.05675	1.45081
10.330	15.206	.00984	.22297	.03783	.01885	-.00824	-.00484	.01185	.20524	.09498	2.16078
10.330	20.630	-.00572	.40041	.03863	.02327	-.00954	-.00496	.01057	.36112	.17723	2.03763
10.330	25.662	-.02314	.59321	.03875	.02177	-.01104	-.00531	.00963	.51792	.29182	1.77480
	GRADIENT	-.00132	.01564	-.00192	.00145	.00006	-.00002	-.00014	.01480	-.00229	.23671

OA105 CFHT109 MODEL 32-0 (O)N49 PITCH DOWN (ZH225N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 32/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.288	.03267	-.20522	.10749	-.02560	-.00113	-.00369	.00742	-.18273	.14241	-1.28308
10.330	-5.446	.02346	-.14057	.08852	-.01837	-.00197	-.00288	.00945	-.13154	.10147	-1.29638
10.330	-.313	.02298	-.06980	.07282	-.01383	-.00248	-.00263	.00657	-.06949	.07329	-.94811
10.330	4.872	.01918	.00936	.06234	-.00556	-.00303	-.00237	.00447	.00403	.06291	.06413
10.330	10.158	.01100	.11089	.05523	.00171	-.00406	-.00214	.00374	.09941	.07392	1.34485
10.330	15.144	.00314	.23987	.05119	.00357	-.00473	-.00226	.00327	.21816	.11208	1.94655
10.330	20.488	-.00461	.41919	.05124	.00550	-.00550	-.00238	.00086	.37474	.19473	1.92444
10.330	25.535	-.01298	.61492	.05068	.00130	-.00629	-.00251	-.00123	.53301	.31080	1.71498
	GRADIENT	-.00073	.01527	-.00202	.00159	-.00011	.00005	-.00041	.01416	-.00198	.19522

OA105 CFHT109 MODEL 32-0 (O)N52 PITCH UP (ZH226N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 33/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.535	-.12513	-.22384	.11221	-.01573	-.01508	.03034	-.06471	-.19955	.15125	-1.31938
10.330	-5.244	-.16078	-.15147	.09760	-.00420	-.01886	.03396	-.07004	-.14192	.11103	-1.27820
10.330	-.281	-.12299	-.08032	.07664	-.02230	-.01398	.02362	-.04916	-.07994	.07705	-1.03783
10.330	4.914	-.06113	.00039	.06416	-.01769	-.00746	.01134	-.02488	-.00511	.06396	-.07984
10.330	9.977	-.02956	.10183	.05744	-.01258	-.00417	.00561	-.01472	.09034	.07421	1.21725
10.330	15.143	-.03012	.24574	.05577	-.01150	-.00438	.00529	-.01657	.22264	.11803	1.88629
10.330	20.472	-.03349	.42910	.05791	-.01069	-.00428	.00573	-.02177	.38175	.20433	1.86826
10.330	25.523	-.04102	.62583	.05655	-.01349	-.00515	.00621	-.02531	.54039	.32068	1.68513
	GRADIENT	.01191	.01554	-.00240	.00089	.00126	-.00236	.00467	.01440	-.00252	.18441

OA105 CFHT109 MODEL 32-0 (0)N52 PITCH UP (ZH227N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6600 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	446.000	ELEVON =	-20.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	7.000		

RUN NO. 35/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.583	-.12769	-.25548	.11989	.00458	-.01558	.03117	-.06648	-.22912	.16478	-1.39050
10.330	-5.325	-.15432	-.17599	.09937	.00023	-.01947	.03379	-.07517	-.16602	.11527	-1.44029
10.330	-.294	-.11899	-.09369	.07908	-.01353	-.01365	.02288	-.04748	-.09329	.07956	-1.17239
10.330	4.904	-.05621	-.01194	.06565	-.01032	-.00719	.01063	-.02337	-.01750	.06439	-.27185
10.330	9.975	-.02774	.09111	.05900	-.00364	-.00425	.00556	-.01510	.07951	.07389	1.07609
10.330	15.181	-.02924	.22876	.05660	.00205	-.00433	.00519	-.01661	.20595	.11453	1.79819
10.330	20.341	-.03275	.39222	.05786	.00994	-.00416	.00560	-.02156	.34765	.19059	1.82404
10.330	25.555	-.03846	.58220	.05660	.01738	-.00480	.00619	-.02577	.50082	.30222	1.65717
	GRADIENT	.01208	.01573	-.00258	.00062	.00124	-.00236	.00464	.01458	-.00292	.17329

OA105 CFHT109 MODEL 32-0 (0)N49 PITCH DOWN (ZH228N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6600 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	446.000	ELEVON =	-20.000
AILRON =	.000	BDFLAP =	.000
SPDBRK =	55.000	RUDDER =	.000
Q-SIM =	7.000		

RUN NO. 36/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.559	.03669	-.26680	.10377	.01342	-.00416	-.00564	.02626	-.24326	.15090	-1.61206
10.330	-5.239	.02980	-.17796	.07872	.01033	-.00512	-.00421	.01909	-.17003	.09464	-1.79653
10.330	-.172	.03289	-.10190	.06160	.00754	-.00527	-.00485	.01196	-.10172	.06191	-1.64298
10.330	4.894	.02902	-.02148	.05068	.01527	-.00574	-.00515	.01206	-.02573	.04866	-.52867
10.330	10.078	.01735	.08178	.04127	.02010	-.00614	-.00514	.01261	.07330	.05494	1.33413
10.330	15.426	.00673	.22038	.03802	.02698	-.00643	-.00500	.01262	.20233	.09527	2.12369
10.330	20.626	.00034	.38485	.03814	.03700	-.00647	-.00550	.01253	.34675	.17126	2.02465
10.330	25.650	-.00916	.56484	.03654	.04284	-.00727	-.00609	.01232	.49336	.27744	1.77827
	GRADIENT	-.00076	.01587	-.00216	.00153	-.00009	-.00006	.00002	.01500	-.00262	.21996

OA105 CFHT109 MODEL 32-0 (O)N49N52 ROLL (ZH229N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 446.000 ELEVON = -20.000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 37/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.459	-.09812	-.29327	.10331	.03389	-.02009	.02569	-.04098	-.26964	.15483	-1.74150
10.330	-5.201	-.11567	-.20927	.08093	.02644	-.02279	.02648	-.05265	-.20107	.09957	-2.01939
10.330	-.164	-.06794	-.12893	.05781	.01060	-.01582	.01307	-.02354	-.12876	.05817	-2.21336
10.330	5.057	-.02103	-.04894	.04814	.01306	-.00999	.00281	-.00344	-.05300	.04364	-1.21437
10.330	10.038	-.01468	.05624	.04163	.01916	-.00839	.00031	.00023	.04812	.05080	.94736
10.330	15.362	-.03288	.19802	.03749	.02699	-.00905	.00082	.00072	.18101	.08861	2.04276
10.330	20.478	-.04363	.36396	.03768	.03563	-.00940	.00064	.00137	.32778	.16263	2.01552
10.330	25.607	-.05157	.54587	.03616	.04273	-.00942	.00066	-.00311	.47663	.26853	1.77498
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-0 (O)N51 YAW (ZH230N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 504.000 ELEVON = -20.000
AILRON = .000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 7.000

RUN NO. 38/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.556	.01003	-.25065	.11803	-.00895	-.00191	-.00305	.02924	-.22478	.16195	-1.38801
10.330	-5.278	.02899	-.15994	.09345	-.01802	.00030	-.00525	.01933	-.15067	.10776	-1.39817
10.330	-.254	.03866	-.08524	.07453	-.02304	.00152	-.00588	.01454	-.08491	.07491	-1.13352
10.330	4.945	.04678	-.01026	.06280	-.01451	.00271	-.00668	.01500	-.01564	.06168	-.25353
10.330	10.050	.04167	.08961	.05600	-.00191	.00021	-.00677	.01603	.07847	.07078	1.10865
10.330	15.348	.00459	.22483	.05379	.01012	-.00500	-.00373	.01069	.20257	.11138	1.81870
10.330	20.390	-.01441	.38687	.05409	.01921	-.00655	-.00275	.00896	.34379	.18549	1.85344
10.330	25.757	-.02737	.58305	.05335	.02557	-.00725	-.00252	.00667	.50193	.30142	1.66523
	GRADIENT	.00156	.01442	-.00226	.00164	.00023	-.00015	.00009	.01332	-.00254	.16926

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH231N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8199 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = 15.000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 40/ 0 RN/L = 1.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.724	-.02245	-.22406	.11002	-.02119	.00155	.00441	-.00886	-.19968	.14979	-1.33302
10.330	-5.419	-.04880	-.15556	.09251	-.00734	-.00451	.01024	-.01708	-.14613	.10679	-1.36843
10.330	-.197	-.05019	-.08296	.07384	-.01197	-.00657	.01022	-.02024	-.08271	.07413	-1.11581
10.330	4.982	-.03449	-.00246	.06169	-.00634	-.00521	.00675	-.01507	-.00789	.06124	-.12742
10.330	10.018	.00173	.10500	.05527	-.00702	-.00121	.00086	-.00373	.09378	.07269	1.29022
10.330	15.163	.03859	.25163	.05534	-.01014	.00349	-.00300	.00158	.22839	.11923	1.91554
10.330	20.303	.06747	.43174	.05836	-.01280	.00691	-.00410	-.00082	.38466	.20454	1.88060
10.330	25.515	.09910	.64283	.06082	-.01928	.00987	-.00469	-.00418	.55394	.33179	1.66955
	GRADIENT	.00303	.01554	-.00235	.00109	.00026	-.00067	.00100	.01446	-.00249	.19085

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH232N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = -15.000 BDFLAP = .000
SPDBRK = 55.000 RUDDER = .000
Q-SIM = 20.000

RUN NO. 42/ 0 RN/L = 1.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.611	.01333	-.21821	.10888	-.02239	-.00786	.00250	-.00611	-.19443	.14720	-1.32089
10.330	-5.269	-.03391	-.14570	.09228	-.01143	-.01078	.00889	-.01382	-.13661	.10527	-1.29765
10.330	-.233	-.05077	-.07747	.07395	-.01534	-.01113	.01046	-.02121	-.07717	.07426	-1.03912
10.330	5.006	-.04829	.00355	.06194	-.01111	-.01122	.00782	-.01583	-.00186	.06201	-.03007
10.330	9.970	-.04362	.11279	.05548	-.01408	-.01150	.00411	-.00666	.10148	.07417	1.36831
10.330	15.229	-.06228	.26279	.05595	-.01746	-.01433	.00281	-.00298	.23887	.12302	1.94174
10.330	20.283	-.10679	.44227	.06014	-.01969	-.01919	.00426	-.00714	.39400	.20973	1.87861
10.330	25.624	-.17008	.65278	.06296	-.02476	-.02473	.00635	-.01224	.56135	.33907	1.65558
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH233N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = .000 RUDDER = 20.000
Q-SIM = 20.000

RUN NO. 44/ 0 RN/L = 1.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.671	.04084	-.21088	.09823	-.03591	.00131	-.00596	.00937	-.18905	.13558	-1.39441
10.330	-5.356	.02869	-.13888	.08138	-.02533	-.00064	-.00365	.00906	-.13068	.09399	-1.39037
10.330	-.264	-.00773	-.07439	.06518	-.02247	-.00505	.00337	-.00880	-.07409	.06552	-1.13070
10.330	5.018	-.02864	-.00151	.05677	-.00820	-.00756	.00538	-.01265	-.00647	.05642	-.11472
10.330	10.018	-.01793	.10069	.05133	-.00294	-.00648	.00192	-.00494	.09022	.06807	1.32553
10.330	15.362	-.01002	.24444	.04937	.00046	-.00581	-.00037	-.00145	.22262	.11237	1.98125
10.330	20.408	-.02044	.41499	.04990	.00315	-.00669	-.00020	-.00435	.37154	.19147	1.94047
10.330	25.518	-.03479	.61299	.04903	-.00017	-.00776	.00038	-.00772	.53207	.30832	1.72569
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N49N52 ROLL (ZH234N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
AILRON = .000 BDFLAP = .000
SPDBRK = .000 RUDDER = -20.000
Q-SIM = 20.000

RUN NO. 46/ 0 RN/L = 1.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	-10.524	-.00544	-.20860	.09822	-.03555	-.00433	.00421	-.00798	-.18715	.13467	-1.38969
10.330	-5.407	-.03397	-.14166	.08394	-.02218	-.00762	.00854	-.01292	-.13312	.09691	-1.37359
10.330	-.299	-.05511	-.07889	.06868	-.01809	-.00976	.01129	-.02254	-.07853	.06910	-1.13654
10.330	4.906	-.04626	-.00422	.05931	-.00651	-.00908	.00811	-.01739	-.00928	.05873	-.15794
10.330	9.994	-.02265	.09758	.05204	-.00165	-.00671	.00248	-.00559	.08707	.06819	1.27690
10.330	15.165	-.01243	.23784	.05006	.00096	-.00600	.00013	-.00197	.21646	.11054	1.95828
10.330	20.336	-.01995	.41165	.05064	.00367	-.00674	.00008	-.00468	.36839	.19054	1.93345
10.330	25.602	-.03514	.62026	.05011	.00007	-.00786	.00062	-.00825	.53771	.31322	1.71672
	GRADIENT	.00170	.01435	-.00180	.00222	.00013	-.00061	.00099	.01330	-.00199	.18801

OA105 CFHT109 MODEL 32-O (O)N51 YAW (ZH235N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN.	XO	
LREF =	474.6100 IN.	YMRP =	.0000 IN.	YO	
BREF =	936.6800 IN.	ZMRP =	375.0000 IN.	ZO	
SCALE =	.0100				

PARAMETRIC DATA

ALPHA =	25.000	Q(PSF) =	150.000
ELEVON =	.000	AILRON =	.000
BDFLAP =	.000	SPDBRK =	55.000
RUDDER =	.000		

RUN NO. 50/ 0 RN/L = 1.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	PCRCS	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	.120	.01841	.65670	.06057	-.01386	-.00109	-.00112	-.01048	.56625	.33806	1.67498
10.330	100.299	-.00376	.65228	.05879	-.00883	-.00447	-.00164	-.00431	.56292	.33474	1.68165
10.330	197.969	-.01566	.64710	.05790	-.00541	-.00659	-.00221	.00032	.55855	.33183	1.68321
10.330	300.657	-.02576	.64168	.05731	-.00305	-.00812	-.00257	.00346	.55391	.32898	1.68369
10.330	401.357	-.03446	.63927	.05699	-.00178	-.00914	-.00263	.00550	.55183	.32772	1.68384
10.330	497.012	-.04157	.63822	.05629	-.00025	-.01007	-.00247	.00663	.55111	.32676	1.68661
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N49N50 PITCH DOWN (ZH236N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN.	XO	
LREF =	474.6100 IN.	YMRP =	.0000 IN.	YO	
BREF =	936.6800 IN.	ZMRP =	375.0000 IN.	ZO	
SCALE =	.0100				

PARAMETRIC DATA

ALPHA =	25.000	Q(PSF) =	150.000
ELEVON =	.000	AILRON =	.000
BDFLAP =	.000	SPDBRK =	55.000
RUDDER =	.000		

RUN NO. 49/ 0 RN/L = 1.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	PCRCS	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	.162	.01827	.64687	.06035	-.01365	-.00108	-.00105	-.01016	.55754	.33352	1.67167
10.330	100.545	.01306	.62004	.04679	.00665	-.00167	-.00088	-.00958	.53895	.31012	1.73790
10.330	201.390	.01371	.59939	.03765	.02188	-.00173	-.00124	-.00868	.52409	.29328	1.78698
10.330	300.558	.01455	.58171	.02869	.03641	-.00187	-.00151	-.00795	.51184	.27790	1.84179
10.330	399.844	.01617	.57006	.01939	.04869	-.00179	-.00178	-.00729	.50517	.26485	1.90739
10.330	482.945	.01654	.55963	.01124	.05849	-.00186	-.00207	-.00668	.49916	.25327	1.97086
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N49N50 PITCH DOWN (ZH237N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.6100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

ALPHA = 25.000 Q(PSF) = 75.000
ELEVON = .000 AILRON = .000
BDFLAP = .000 SPDBRK = 55.000
RUDDER = .000

RUN NO. 48/ 0 RN/L = .51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	PCRCS	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	.119	.01338	.64689	.06743	-.01322	-.00079	-.00094	-.00941	.55668	.33600	1.65737
10.330	99.973	.01208	.59318	.04451	.02328	-.00117	-.00106	-.00819	.51781	.29277	1.76870
10.330	201.974	.01182	.55976	.02463	.05044	-.00158	-.00153	-.00680	.49581	.26098	1.89982
10.330	303.632	.01101	.53258	.00562	.07444	-.00195	-.00180	-.00541	.47921	.23244	2.06168
10.330	402.516	.01114	.50890	-.01209	.09854	-.00236	-.00217	-.00440	.46524	.20659	2.25199
10.330	482.855	.01130	.48330	-.02500	.11792	-.00279	-.00274	-.00329	.44756	.18409	2.43120
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA105 CFHT109 MODEL 32-O (O)N51 YAW (ZH238N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.6100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100

PARAMETRIC DATA

ALPHA = 25.000 Q(PSF) = 75.000
ELEVON = .000 AILRON = .000
BDFLAP = .000 SPDBRK = 55.000
RUDDER = .000

RUN NO. 47/ 0 RN/L = .51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	PCRCS	BETA	CN	CA	CLM	CBL	CYN	CY	CL	CD	L/D
10.330	.162	.01398	.64519	.06844	-.01260	-.00076	-.00089	-.00969	.55483	.33632	1.64970
10.330	100.322	-.00148	.62651	.06486	-.00329	-.00594	-.00215	.00068	.53942	.32519	1.65878
10.330	202.330	-.00888	.61831	.06584	.00131	-.00877	-.00264	.00510	.53244	.32077	1.65985
10.330	305.390	-.01844	.61203	.06219	.00444	-.01097	-.00257	.00792	.52741	.31668	1.66542
10.330	400.197	-.02505	.60745	.06164	.00754	-.01315	-.00262	.01002	.52346	.31429	1.66551
10.330	496.498	-.03021	.59949	.05971	.01003	-.01478	-.00292	.01287	.51713	.30908	1.67313
	GRADIENT	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000

OA-85 CFHT101 MODEL 32-0 01 N49 N50 RCS OFF (ZQI01F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = .000 ELEVON = 15.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 66/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.358	-.19259	.11623	-.04850	.00042	-.00007	-.00515
10.330	-5.182	-.12160	.09908	-.03860	.00010	-.00039	-.00452
10.330	-.258	-.04868	.08033	-.03745	.00002	-.00029	-.00397
10.330	4.885	.03733	.07471	-.03542	-.00003	-.00044	-.00322
10.330	10.037	.15848	.07250	-.04227	-.00031	-.00060	-.00342
10.330	15.235	.31635	.07464	-.05688	-.00049	-.00064	-.00386
10.330	19.945	.49215	.08046	-.07113	-.00062	-.00074	-.00494
10.330	25.203	.72603	.08896	-.09129	-.00088	-.00058	-.00658
10.330	30.410	.95981	.09518	-.11408	-.00102	-.00040	-.00752
10.330	35.559	1.21688	.10227	-.14234	-.00119	-.00042	-.00911
	GRADIENT	.01672	-.00109	.00039	-.00001	-.00003	.00015

OA-85 CFHT101 MODEL 32-0 01 N51 RCS OFF (ZQI02F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = .000 ELEVON = -20.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 25/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.368	-.23493	.12691	-.02253	.00086	-.00023	-.00540
10.330	-5.340	-.15610	.10661	-.01915	.00040	-.00049	-.00395
10.330	-.235	-.06939	.08386	-.02317	.00025	-.00044	-.00340
10.330	4.911	.01420	.07447	-.01535	.00012	-.00058	-.00239
10.330	10.055	.11483	.06782	-.00743	.00005	-.00082	-.00248
10.330	15.145	.24681	.06425	-.00115	-.00010	-.00099	-.00257
10.330	20.351	.41422	.06476	.00678	-.00020	-.00115	-.00302
10.330	25.448	.60285	.06551	.01224	-.00034	-.00114	-.00343
10.330	30.664	.82143	.06529	.01238	-.00062	-.00104	-.00392
10.330	35.742	1.05891	.06430	.00664	-.00084	-.00114	-.00462
	GRADIENT	.01624	-.00182	.00152	-.00003	-.00003	.00020

OA-85 CFHT101 MODEL 32-0 01 N52 RCS OFF (ZQI03F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = .000 ELEVON = .000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 71/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.428	-.20085	.11538	-.04091	.00055	-.00045	-.01203
10.330	-5.175	-.12881	.09779	-.03211	.00025	-.00075	-.01048
10.330	-.245	-.05617	.07815	-.03046	.00011	-.00070	-.01009
10.330	4.855	.02196	.07000	-.02152	.00005	-.00082	-.00933
10.330	10.033	.12287	.06477	-.01607	-.00004	-.00105	-.00971
10.330	15.086	.25636	.06234	-.01470	-.00017	-.00116	-.01011
10.330	20.285	.43143	.06252	-.01441	-.00028	-.00133	-.01088
10.330	25.446	.62755	.06321	-.01810	-.00048	-.00127	-.01243
10.330	30.616	.85611	.06357	-.02915	-.00066	-.00113	-.01339
10.330	35.710	1.09233	.06314	-.04610	-.00086	-.00121	-.01481
	GRADIENT	.01532	-.00160	.00175	-.00001	-.00002	.00015

OA-85 CFHT101 MODEL 32-0 01 N61 RCS OFF (ZQI04F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 100.000
PCRCS = .000 ELEVON = 15.000
BDFLAP = 13.750 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 55/ 0 RN/L = .67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.300	14.983	.31205	.07858	-.06421	-.00038	-.00048	-.00374
10.300	20.028	.50272	.08606	-.08443	-.00052	-.00053	-.00447
10.300	25.173	.72233	.09518	-.10792	-.00075	-.00038	-.00579
10.300	30.232	.95829	.10444	-.13543	-.00082	-.00030	-.00668
10.300	35.435	1.22026	.11412	-.16694	-.00096	-.00023	-.00774
	GRADIENT	.04446	.00175	-.00502	-.00003	.00001	-.00020

OA-85 CFHT101 MODEL 32-0 01 N43 N44 RCS OFF (ZQ105F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 100.000
PCRCS = .000 ELEVON = .000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 37/ 0 RN/L = .66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.300	-15.118	.26395	.06446	-.01592	-.00005	-.00105	-.01006
10.300	20.239	.43410	.06532	-.01549	-.00016	-.00117	-.01124
10.300	25.209	.62652	.06597	-.01892	-.00034	-.00113	-.01226
10.300	30.461	.85706	.06741	-.02947	-.00041	-.00108	-.01326
10.300	35.638	1.10047	.06704	-.04565	-.00055	-.00110	-.01453
	GRADIENT	.04091	.00014	-.00144	-.00002	-.00000	-.00021

OA-85 CFHT101 MODEL 32-0 01 N43 N60 RCS OFF (ZQ106F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 100.000
PCRCS = .000 ELEVON = -20.000
BDFLAP = -14.250 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 14/ 0 RN/L = .63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.300	14.942	.23835	.06606	-.00019	-.00003	-.00060	-.00264
10.300	20.222	.39416	.06550	.00941	-.00011	-.00072	-.00327
10.300	25.433	.57910	.06688	.01795	-.00024	-.00069	-.00431
10.300	30.375	.77118	.06705	.02220	-.00020	-.00074	-.00467
10.300	35.506	.99310	.06638	.02271	-.00039	-.00077	-.00538
	GRADIENT	.03676	.00004	.00115	-.00002	-.00001	-.00013

OA-85 CFHT101 MODEL 32-0 01 N46 N47 RCS OFF (ZQI07F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	-20.000
BDFLAP =	-14.250	RUDFLR =	55.000
Q-SIM =	.000		

RUN NO. 19/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	15.204	.24385	.06167	.00123	-.00005	-.00078	-.00173
10.330	20.315	.40883	.06236	.01114	-.00016	-.00102	-.00258
10.330	25.471	.59038	.06258	.01908	-.00032	-.00104	-.00282
10.330	30.559	.80301	.06304	.02301	-.00057	-.00096	-.00351
10.330	35.795	1.03191	.06170	.02183	-.00081	-.00112	-.00422
	GRADIENT	.03832	.00001	.00103	-.00004	-.00001	-.00011

OA-85 CFHT101 MODEL 32-0 01 N46 N47 RCS OFF (ZQI08F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	.000
BDFLAP =	.000	RUDFLR =	55.000
Q-SIM =	.000		

RUN NO. 42/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	15.085	.26104	.06214	-.01495	-.00011	-.00081	-.00254
10.330	20.335	.43830	.06247	-.01430	-.00026	-.00103	-.00328
10.330	25.569	.64094	.06323	-.01861	-.00042	-.00098	-.00441
10.330	30.394	.85088	.06328	-.02898	-.00062	-.00089	-.00508
10.330	35.600	1.10735	.06391	-.04742	-.00081	-.00094	-.00628
	GRADIENT	.04118	.00009	-.00155	-.00003	-.00000	-.00018

OA-85 CFHT101 MODEL 32-0 01 N46 N47 RCS OFF (ZQ109F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.6100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	.000	ELEVON =	15.000
BDFLAP =	13.750	RUDFLR =	55.000
Q-SIM =	.000		

RUN NO. 59/ 0 RN/L = .97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	15.026	.31808	.07522	-.06500	-.00045	-.00057	-.00312
10.330	20.211	.51099	.08279	-.08541	-.00058	-.00064	-.00402
10.330	25.217	.72610	.09142	-.10908	-.00077	-.00050	-.00532
10.330	30.385	.97199	.10088	-.13843	-.00092	-.00035	-.00638
10.330	35.433	1.22466	.11002	-.17075	-.00111	-.00035	-.00756
	GRADIENT	.04460	.00172	-.00519	-.00003	.00001	-.00022

OA-85 CFHT101 MODEL 32-0 02 N43 N60 RCS OFF (ZQ110F) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.6100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	100.000
PCRCS =	.000	ELEVON =	15.000
BDFLAP =	13.750	RUDFLR =	55.000
Q-SIM =	.000		

RUN NO. 50/ 0 RN/L = .63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.300	14.884	.30779	.06328	-.06353	-.00040	-.00049	-.00477
10.300	20.217	.50552	.07092	-.08421	-.00052	-.00048	-.00584
10.300	24.941	.70749	.07899	-.10548	-.00064	-.00042	-.00697
10.300	30.221	.95119	.08865	-.13334	-.00071	-.00029	-.00810
10.300	35.464	1.21212	.09805	-.16456	-.00077	-.00021	-.00963
	GRADIENT	.04407	.00171	-.00491	-.00002	.00001	-.00023

OA-85 CFHT101 MODEL 32-D 01 N43 N60 RCS OFF (ZQ111F) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 100.000
PCRCS = .000 ELEVON = 15.000
BDFLAP = -14.250 RUDFLR = 55.000
Q-SIM = .000

RUN NO. 75/ 0 RN/L = .63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.300	15.012	.30252	.07663	-.05373	-.00027	-.00048	-.00254
10.300	20.114	.49413	.08351	-.06771	-.00040	-.00057	-.00334
10.300	25.346	.70460	.09051	-.08303	-.00054	-.00054	-.00430
10.300	30.162	.92124	.09702	-.10028	-.00063	-.00049	-.00492
10.300	35.314	1.18011	.10476	-.12256	-.00077	-.00045	-.00629
	GRADIENT	.04307	.00138	-.00336	-.00002	.00000	-.00018

OA-85 CFHT101 MODEL 32-D 01N49N50 PITCH DOWN (ZQ101N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 167.000 ELEVON = 15.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 67/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.399	-.20194	.10096	-.02957	-.00004	-.00011	-.00487
10.330	-5.243	-.14104	.07942	-.01691	-.00034	-.00057	-.00168
10.330	-.052	-.07099	.06404	-.01224	-.00081	-.00001	-.00215
10.330	4.984	.00254	.05549	-.00555	-.00061	-.00047	-.00116
10.330	9.994	.11353	.05304	-.00810	-.00070	-.00058	-.00148
10.330	15.260	.26608	.05344	-.02263	-.00116	-.00021	-.00304
10.330	20.253	.45268	.05987	-.03789	-.00129	-.00048	-.00341
10.330	25.259	.67260	.06781	-.05586	-.00141	-.00063	-.00430
10.330	30.412	.90403	.07440	-.07789	-.00147	-.00054	-.00534
10.330	35.545	1.15966	.08081	-.10508	-.00160	-.00057	-.00656
	GRADIENT	.01460	-.00170	.00133	.00004	-.00009	.00020

OA-85 CFHT101 MODEL 32-0 01N49N52 ROLL (ZQI02N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	158.000	ELEVON =	15.000
BDFLAP =	.000	RUDFLR =	55.000
Q-SIN =	20.000		

RUN NO. 68/ 0 RN/L = 1.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.458	-.20556	.10785	-.03664	-.00332	.00338	-.01209
10.330	-5.284	-.14198	.09256	-.02053	-.00787	.00961	-.01941
10.330	-.197	-.07420	.07497	-.02257	-.00869	.00962	-.02084
10.330	4.855	.00390	.06415	-.02027	-.00883	.00757	-.01665
10.330	10.029	.12661	.06000	-.02806	-.00733	.00266	-.00418
10.330	15.153	.28227	.06316	-.04189	-.00620	.00019	.00068
10.330	20.373	.48055	.07056	-.05707	-.00665	.00044	-.00075
10.330	25.297	.69324	.07795	-.07357	-.00734	.00128	-.00360
10.330	30.351	.93927	.08555	-.09738	-.00707	.00055	-.00318
10.330	35.562	1.19249	.09254	-.12563	-.00715	.00008	-.00368
	GRADIENT	.01546	-.00214	.00046	-.00003	-.00041	.00083

OA-85 CFHT101 MODEL 32-0 01N51 YAW (ZQI03N) (04 MAY 74)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	1076.6700 IN. XO		
LREF =	474.8100 IN.	YMRP =	.0000 IN. YO		
BREF =	936.6800 IN.	ZMRP =	375.0000 IN. ZO		
SCALE =	.0100 IN				

PARAMETRIC DATA

BETA =	.000	Q(PSF) =	150.000
PCRCS =	179.000	ELEVON =	15.000
BDFLAP =	.000	RUDFLR =	55.000
Q-SIN =	20.000		

RUN NO. 65/ 0 RN/L = .98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.409	-.19297	.11442	-.04745	.00043	-.00189	-.00182
10.330	-5.136	-.12606	.09411	-.03761	-.00109	-.00200	.00814
10.330	-.219	-.05278	.07948	-.03702	-.00041	-.00321	.00505
10.330	4.925	.03071	.07058	-.03200	-.00104	-.00353	.00590
10.330	10.009	.13754	.06696	-.03761	-.00264	-.00310	.00722
10.330	15.064	.29165	.06988	-.04995	-.00347	-.00216	.00521
10.330	20.281	.48886	.07660	-.06402	-.00470	-.00152	.00348
10.330	25.439	.70474	.08403	-.08261	-.00569	-.00113	.00267
10.330	30.286	.93077	.09170	-.10498	-.00573	-.00127	.00207
10.330	35.495	1.19202	.09887	-.13304	-.00617	-.00136	.00070
	GRADIENT	.01623	-.00173	.00098	-.00012	-.00006	.00017

OA-85 CFHT101 MODEL 32-0 01N51 YAW (ZQI04N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 179.000 ELEVON = -20.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 26/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.357	-.23358	.12211	-.02196	.00097	-.00196	-.00073
10.330	-5.326	-.16116	.09952	-.01948	-.00033	-.00244	.01121
10.330	-.197	-.07329	.07997	-.02265	.00088	-.00378	.00727
10.330	4.984	.00801	.06822	-.01402	.00059	-.00396	.00742
10.330	10.225	.10459	.05947	-.00669	-.00070	-.00373	.00908
10.330	15.110	.23085	.05798	.00158	-.00169	-.00283	.00752
10.330	20.417	.40025	.05906	.01164	-.00320	-.00201	.00633
10.330	25.439	.58627	.06083	.01803	-.00443	-.00220	.00645
10.330	30.597	.80749	.06130	.01816	-.00462	-.00227	.00673
10.330	35.728	1.03685	.06144	.01499	-.00680	-.00311	.00622
	GRADIENT	.01569	-.00227	.00167	-.00006	-.00003	.00003

OA-85 CFHT101 MODEL 32-0 01N49N52 ROLL (ZQI05N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = -20.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 27/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.473	-.24712	.11449	-.00970	-.00295	.00420	-.01327
10.330	-5.085	-.16591	.09499	-.00345	-.00704	.00983	-.01939
10.330	-.186	-.09567	.07513	-.01240	-.00731	.01047	-.02293
10.330	4.925	-.01902	.06200	-.00459	-.00658	.00720	-.01632
10.330	10.206	.09127	.05301	.00093	-.00467	.00220	-.00431
10.330	15.015	.21806	.05100	.00723	-.00398	-.00031	.00198
10.330	20.329	.38714	.05253	.01717	-.00469	-.00064	.00194
10.330	25.483	.58593	.05421	.02505	-.00573	.00038	-.00075
10.330	30.689	.79313	.05373	.02723	-.00541	-.00089	.00095
10.330	35.839	1.02393	.05251	.02377	-.00601	-.00138	.00074
	GRADIENT	.01500	-.00257	.00153	.00014	-.00064	.00129

OA-85 CFHT101 MODEL 32-0 01N52 PITCH UP (ZQI06N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = -20.000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 29/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.374	-.23909	.12346	-.01794	-.00211	.00741	-.01954
10.330	-5.206	-.16182	.10606	-.01017	-.00590	.01276	-.02882
10.330	-.267	-.08182	.08322	-.01855	-.00683	.01350	-.02852
10.330	4.685	-.00484	.07159	-.01218	-.00621	.01122	-.02282
10.330	10.060	.10242	.06248	-.00780	-.00353	.00525	-.01220
10.330	15.141	.24053	.06120	-.00319	-.00113	.00138	-.00541
10.330	20.313	.41174	.06302	.00630	-.00153	.00169	-.00686
10.330	25.651	.60720	.06349	.01307	-.00224	.00260	-.00932
10.330	30.510	.81101	.06331	.01282	-.00162	.00136	-.00714
10.330	35.762	1.04926	.06233	.00803	-.00175	.00120	-.00769
	GRADIENT	.01494	-.00226	.00124	.00012	-.00044	.00111

OA-85 CFHT101 MODEL 32-0 01N52 PITCH UP (ZQI07N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6800 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 72/ 0 RN/L = .96 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.389	-.20623	.11192	-.03626	-.00230	.00737	-.02010
10.330	-5.120	-.13709	.09868	-.02247	-.00588	.01275	-.02922
10.330	-.195	-.06701	.07829	-.02400	-.00661	.01308	-.02953
10.330	4.901	.00733	.06811	-.01901	-.00625	.01126	-.02435
10.330	10.063	.10590	.05748	-.01385	-.00287	.00549	-.01430
10.330	15.074	.24892	.05895	-.01665	-.00121	.00152	-.00731
10.330	20.306	.42527	.06088	-.01501	-.00164	.00173	-.00928
10.330	25.588	.62660	.06147	-.01774	-.00240	.00271	-.01237
10.330	30.497	.84225	.06193	-.02835	-.00190	.00160	-.01090
10.330	35.642	1.08494	.06200	-.04495	-.00191	.00134	-.01208
	GRADIENT	.01459	-.00200	.00098	.00007	-.00036	.00102

OA-85 CFHT101 MODEL 32-0 01N49N52 ROLL (ZQI08N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6600 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 158.000 ELEVON = .000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 70/ 0 RN/L = .99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.403	-.21198	.10369	-.02489	-.00386	.00348	-.01504
10.330	-5.154	-.14385	.08962	-.01288	-.00766	.00904	-.02217
10.330	-.190	-.08406	.07151	-.01509	-.00855	.00980	-.02536
10.330	4.955	-.01081	.06000	-.00660	-.00814	.00696	-.01924
10.330	10.032	.08965	.05193	-.00354	-.00626	.00213	-.00748
10.330	15.074	.22642	.05125	-.00099	-.00572	-.00043	-.00210
10.330	20.350	.39892	.05237	.00053	-.00604	-.00038	-.00322
10.330	25.389	.58862	.05297	-.00158	-.00661	.00018	-.00553
10.330	30.540	.80815	.05348	-.01114	-.00619	-.00054	-.00514
10.330	35.670	1.04652	.05361	-.02808	-.00647	-.00107	-.00576
	GRADIENT	.01424	-.00224	.00165	.00008	-.00055	.00119

OA-85 CFHT101 MODEL 32-0 01N49N50 PITCH DOWN (ZQI09N) (04 MAY 74)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 1076.6700 IN. XO
LREF = 474.8100 IN. YMRP = .0000 IN. YO
BREF = 936.6600 IN. ZMRP = 375.0000 IN. ZO
SCALE = .0100 IN

PARAMETRIC DATA

BETA = .000 Q(PSF) = 150.000
PCRCS = 167.000 ELEVON = .000
BDFLAP = .000 RUDFLR = 55.000
Q-SIM = 20.000

RUN NO. 73/ 0 RN/L = 1.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CN	CA	CLM	CBL	CYN	CY
10.330	-10.362	-.22169	.09808	-.01768	.00069	.00009	-.00716
10.330	-5.287	-.15143	.07909	-.01153	.00024	-.00092	-.00372
10.330	-.149	-.08719	.06367	-.00465	-.00008	-.00070	-.00211
10.330	4.993	-.01326	.05296	.00393	-.00019	-.00059	-.00235
10.330	10.075	.08441	.04608	.01159	-.00078	-.00090	-.00217
10.330	15.156	.21379	.04207	.01435	-.00126	-.00074	-.00317
10.330	20.207	.38380	.04334	.01665	-.00063	-.00094	-.00397
10.330	25.456	.58878	.04413	.01341	-.00079	-.00107	-.00485
10.330	30.640	.80794	.04397	.00325	-.00092	-.00110	-.00584
10.330	35.736	1.05004	.04279	-.01269	-.00122	-.00124	-.00712
	GRADIENT	.01436	-.00208	.00167	-.00002	.00002	-.00005